EFFECTIVENESS OF CIRCULAR HIP MASSAGE ON LABOUR PAIN DURING FIRST STAGE OF LABOUR AMONG PRIMI GRAVID WOMEN AT SELECTED HOSPITAL, SALEM.

By

Ms. SUNITHA. B

Reg. No: 30109425

A DISSERTATION SUBMITTED TO

THE TAMILNADU DR. M.G.R. MEDICAL UNIVERSITY, CHENNAI,

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE

DEGREE OF MASTER OF SCIENCE IN NURSING

(OBSTETRICS AND GYNAECOLOGICAL NURSING)

APRIL – 2012

CERTIFICATE

Certified that this is the bonafide work of **Ms**. **SUNITHA. B,** final year M.Sc (Nursing) student of Sri Gokulam College of Nursing**,** Salem, submitted in partial fulfilment of the requirement for the Degree of Master of Science in Nursing to The Tamil Nadu Dr. M.G.R. Medical University, Chennai, under the Registration No.**30109425.**

College Seal:

Signature: ……

Prof. Dr. A. JAYASUDHA, Ph.D., (N).,

PRINCIPAL,

SRI GOKULAM COLLEGE OF NURSING,

3/836, PERIYAKALAM,

NEIKKARAPATTI,

SALEM - 636 010.

EFFECTIVENESS OF CIRCULAR HIP MASSAGE ON LABOUR PAIN DURING FIRST STAGE OF LABOUR AMONG PRIMI GRAVID WOMEN AT SELECTED HOSPITAL, SALEM.

Approved by the Dissertation Committee on: 21.12.2011

Signature of the Clinical Speciality Guide:……...

Mrs.K. AMUDHA, M.Sc (N).,

Associate Professor,

Dept of Obstetrics and Gynaecology,

Sri Gokulam College of Nursing,

Salem - 636 010.

Signature of Medical Expert: **……...**

Dr. P. CHELLAMMAL, M.D., D.G.O.,

Consultant Obstetrician and Gynaecologist,

Sri Gokulam Hospital,

Salem-636 004.

_____ **_____**

Signature of the Internal Examiner with date

Signature of the External Examiner with date

ACKNOWLEDGEMENT

“Give me the strength to raise my mind
High above daily trifles”

- Gitanjali by R.Tagore

Gratitude is not only the memory but also the respect of the heart rendered to the person for their support, guidance and goodness.

God the giver of all good, my gratitude, for keeping the lamp of determination and perseverance lit all throughout this course of study and for making me believe in the beauty of this endeavor.

I wish to express my deep sense of gratitude and thanks to our Managing Trustee, **Dr. K. Arthanari, M.S.,** Sri Gokulam College Of Nursing, Salem for the opportunity and all the facilities he has provided to undertake the course in his esteemed institution.

I express my sincere thanks to **Dr.P.Chellammal, M.D., DGO**, Consultant Obstetrician and Gynaecologist Sri Gokulam Hospital, for validating the tool, constant guidance and valuable suggestions.

I express my sincere gratitude to **Dr.A.Akila, M.S., (OG)**, Obstetrician and Gynaecologist Sri Gokulam Hospital, for validating the tool, constant guidance and valuable suggestions throughout the study.

It is my privilege to express the deepest sense of gratitude and sincere thanks to beloved **Prof .Dr. A. Jayasudha, Ph.D., (N).,** Principal**,** Sri Gokulam College of Nursing, Salem, for her guidance, valuable suggestion. I consider this as a great honour and privilege to complete the study under her supervision.

I express my appreciation and gratefulness to **Prof.Dr.K.Tamizharasi,Ph.D.,(N).,** Vice Principal, Sri Gokulam College of Nursing, Salem, for her constant support, suggestions and encouragement at every stage which enabled me to complete this study.

I proudly express my deep sense of gratitude and indebtedness to my guide, **Mrs.K.Amudha, M.Sc (N),** Associate Professor, Obstetrics and Gynaecological nursing, Sri Gokulam College of Nursing**,** for laying the strong foundation of research, for his excellent suggestions, valuable guidance, support, ever willing help from time to time, untiring and patience correction which helped me to bring this study a successful one.

I'm very graceful to **Mrs.R.Nalini, M.Sc(N)**,**Mrs.R.Sheela Theras, M.Sc(N), Mrs.C.Radha, M.Sc (N), Mrs.J.Vijyalakshmi, M.Sc(N), Ms.P.Arthi, M.Sc(N).,** Lecturers, Department of Obstetrics and Gynaecological Nursing for their help and support throughout my study.

I express my sincere gratitude to my class Co-ordinator **Mrs.P.Lalitha vijay, M.Sc.(N),** Professor and **Mrs.J.Devikanna M.Sc.(N),** Lecturer ,Sri Gokulam College of Nursing, for their timely help and guidance.

It is the most pleasant time to express my gratitude and exclusive thank to **Dr.S.Sujatha Sudhakar, B.N.Y.S, Adv.Acu,** nature cure and yoga centre for his innovative, constructive and diligent training in massage therapy to ensure the best quality of the study while helped me to do my study in a wonderful and fruitful manner.

I thank all the Nursing and Non-nursing **Faculty members** of Sri Gokulam College of Nursing for their guidance and encouragement inspite of their busy schedule.

My special thanks to **Experts** for their valuable suggestions and constructive comments.

I extend my sincere thanks to the **Dissertation Committee** for offering constructive criticism and due sanction for carrying out this research work

I would like to acknowledge the input received from **Mr.S. Shivkumar, M.Sc., M.Phil., Ph.D.,** and Biostatistician for his assistance in statistical analysis and data interpretation.

I am thankful to **Mr. P.Jayaseelan, M.Sc,** Librarian of Sri Gokulam College of Nursing, and special thanks to librarians of The Tamilnadu Dr.M.G.R.Medical University and Apollo College of Nursing, Chennai for extending their library facilities through out my study.

I express my sincere thanks to **Medical Director** of Salem Polyclinic and Vijaya Hospital Salem, who granted permission to conduct a study and helped during data collection period.

I am thankful to **Mrs.C.Jennifer Pusphalatha, M.A., M.Ed, M.Phill, Ph.D,** Assistant in English, whose editing suggestions and precise sense of language were decisive towards the completion of this dissertation.

I extent my warmest thanks to **Mr.V.Murugesan,** Sri Krishna computers who has helped me to print this dissertation with technical perfection and a complete success.

I whole heartedly thank the **Primigravid women** who willingly agreed to cooperate during data collection period. Without them it would have been impossible to complete this study.

I thank **My Parents, brother, Sister and uncle** who have communicated the determination and sense of purpose to me which has stood me in good stead to carry out my duties with responsibility all throughout.

Last but not least, I express heart felt gratitude and thanks to my **friends** who encouraged and supported to complete the study

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ANNEXURES

ABSTRACT

"A Study was conducted to Evaluate the Effectiveness of Circular Hip Massage on Labour Pain during First Stage of Labour among Primigravid Women, at Selected Hospital, Salem."

A Quantitative evaluative approach with Quasi experimental time series design was adopted. Non probability convenience sampling technique was used to select 60 primi gravid women among which 30 were assigned to experimental group and 30 were assigned to control group during first stage of labour at Salem Poly Clinic and Vijaya hospital, Salem. Structured interview schedule was used to collect data and Numerical Pain Intensity Scale was used to assess the level of labour pain. Circular hip massage was given for 15 minutes every one hour interval for 4 observations and level of pain was assessed before and after each interventions. The collected data was analyzed and findings shows that, in experimental and control group 11(36.7%) and 15(50%) of primigravid women were in the age group of 26-30 yrs , 7(23.3%) and 8(26.7%) completed their higher secondary education, 17(56.7%) and 17(56.7%) of women's were employed, 14(46.7%) were sedentary workers, 18(60%) of them were moderate workers, 17(56.7%) were in 39 weeks of gestation, 19(63.3%) of mothers were in 40 weeks of gestation. The mean difference on level of labour pain in experimental group values were 2.00, 2.33, 2.16, and 2.33, where as in control group values were 0.23, 0.13, 0.06 and 0.16.

In experimental group the calculated 't' value on level of labour pain before and after circular hip massage was 15.76, 16.85, 25.73 and 26.65 which is significant at $p<0.05$ level. Hence H_1 was retained. In experimental group the pre and posttest mean score was 9.90±0.30, 7.56±0.50 whereas in control group the pre and posttest mean score was 8.83±0.64, 9.00±0.58 respectively. So there was a significant difference in pre and post test score on level of labour pain in experimental and control group at $p<0.05$ level. Hence H_2 was retained. The chi-square test revealed that hypotheses H_3 was rejected for both experimental and control group except for occupation($\chi^2=6.21$) and weeks of gestation($\chi^2=6.21$) in experimental group at $p<0.05$ level. Circular Hip Massage is one of the non-pharmacological pain relief measures during labour and since it is a non-invasive, inexpensive and applicable technique, it can be used by a skilled and trained midwife in reducing the level of labour pain.

CHAPTER - I

INTRODUCTION

"A women giving birth to the child has pain because her time has come;

But when her baby was born she forgets the anguish because

Of her joy that a child is born into the outer world"

Pregnancy is a unique exciting time often in a women's life. It highlights the women's amazing, creative and nurturing power. The growing fetus depends entirely on its mother's healthy body for all needs. Consequently pregnant mother must take steps to remain as healthy and well nourished as much as possible.

When the women become pregnant most of them wonder about how to cope with the intensity of pain during labour and birth. It is useful to learn about the pros and cons of different comfort measures, coping strategies, and medications. This helps to be better prepared for the decisions.

Pain in labour is nearly a universal experience for child bearing women. Pain and its relief for women in labour has been a subject of interest since the dawn of mankind. Childbirth has been associated with and throughout history measures has been introduced to relieve pain. Pain can vary different times in the same labour and during different birth by the same women. In addition, labor pain intensifies gradually overtime, which allows the mother body to adapt. These differences can often make labour pain easier to cope with other kinds of pain**. (Lawerence Leeman, 2003)**

The non-pharmacologic approach to pain management includes a wide variety of techniques that address not only the physical sensation of pain, but also attempts to prevent suffering by enhancing the care.

Massage is an ancient practice that has been widely employed during labour. It comprise of deep stroking and superficial stroking of the back which is thought to enhance more relaxation of soft tissue either by blocking the pain impulses to the brain through increased α and β, fibre transmission or by stimulating the total release of endorphins. **(Patricia Janseen, 2008)**

Circular hip massage is a cost effective techniques for labour which is used during the first stage of labour. This massage is good for women experiencing back pain during their labour. It is a specially designed technique in which upward and downward circular strokes are given on either side of spine in the sacral region with controlled breathing. This stimulates the local response of endorphin due to more relaxation of soft tissue which helps in relieving the labour pain.

Many studies have shown that the circular hip massage during first stage of labour was effective and makes the mother to feel comfortable. A study was conducted to evaluate the effectiveness of circular hip massage on labour pain during first stage of labour among 60 primi parturients in selected hospital of Raipur by a quasi experimental design with the non-equivalent control group. The tool used for this study was structured interview schedule. Visual analog scale, zung self rating anxiety scale and fatigue severity scale. Using descriptive and inferential statistics, the pretest mean score of pain in experimental group was almost same (x=4.53, S.D=0.82) as the control group (x=4.83, S.D=0.81) and obtained "t" value was 0.45, where as in the post-test mean pain score in the experimental group (x=5.69, S.D=1.3) was lower as compared to the control group (x=8.75, S.D=2.6) and the calculated "t" value of 4.25 indicated significant difference between the pain level of experimental and control group. The findings concluded that continuous massage hourly from the beginning till the end of the first stage of labour had significantly reduced the pain,

anxiety, and fatigue levels in the experimental group, whereas in control group, the pain, anxiety and fatigue level has increased at the end of first stage of labour. **(Padmavathi. R, 2007)**

Need for the Study

Pregnant women commonly worry about the pain that they will experience during labour and child birth and how they will react to deal with that pain. The amount of pain that the women experiences during contractions differ according to her expectations and preparation for labour, the length of the labour, the position of the fetus and the availability of supportive people around her. The amount of pain she experiences in compounded when fear and anxiety are also present. Perception of pain changes with stages of labour. **(Sedler, 1998)**

Women, who come into labour believing that it will be horrible, are usually surprised afterward. On the other hand, expectations of pain may make a women so tense during labour . **(Davies. J, 1993)**

Massage has been a vital part of prenatal and postnatal care in much culture for centuries. In India, women have recently only begin to experience the pleasures and benefits of massage. During pregnancy many of the pain stress that body undergoes as a result of pregnancy can be alleviated at the hands of professional massage therapist who is specially trained in working in pregnant women.

Massage helps to sooth and relax nervous tension which help the mother sleep more easily and more deeply. Massage can be used during the child birth to make it easier and comfortable for the mother before and after the child birth. It also helps to regain her strength quickly and eases postpartum stress. **(Seymour, 1997)**

Many studies have shown that circular hip massage during first stage of labour was effective and makes the mother comfortable, and pain was relieved. The below studies revealed that the mothers comfort level increased and is cost effective, in comparing with other non-pharmacological methods like music therapy, aromatherapy, reflexology etc.

A study to evaluate the effectiveness of various massage, (circular hip massage, whole back massage, upper back massage, lower circular back massage, leg massage) for childbirth at the John Radcliffle Hospital, U.K. The samples were 30 nulliparous women, 30 were multiparous women followed proper massage techniques. The tool used for the study was numerical pain intensity scale.There was 100% spontaneous vaginal delivery in the multiparous women whreas 81.4% in nulliparous. The result shows that the massage had a positive effect on labour pain and promotes a positive feeling during labour. **(Kimber L, 2006)**

Statement of the Problem

"A Study to Evaluate the Effectiveness of Circular Hip Massage on Labour Pain during First Stage of Labour among Primigravid Women, at a Selected Hospital, Salem."

Objectives

1. To asses the level of labour pain among primigravid women during first stage of labour in experimental and control group.
2. To evaluate the effectiveness of circular hip massage on level of labour pain during first stage of labour in experimental group.
3. To associate the level of labour pain among primigravid women with their selected demographic variables in experimental and control group.

Operational Definition

Evaluate:

It refers to statistical measurement of the level of labour pain among primigravid women in experimental group after circular hip massage.

Effectiveness:

It refers to the significant reduction in the level of labour pain in response to circular hip massage as determined by pre-test and post-test scores.

Circular Hip Massage:

It is a type of massage technique in which upward and downwards circular strokes are given on either side of the sacral region with controlled breathing. The massage is done for 15 minutes with the interval of 1 hour during 1st stage of labour.

1st stage of Labour Pain:

Refers to the active and transitional phase of labour, which begins from 4 cm dilatation of the cervix and ends with complete dilatation of the cervix (10cm).

Labour Pain:

It is a painful uterine contraction at regular intervals with increasing intensity and duration during first stage of labour, which is measured by numerical pain intensity scale during relaxation time.

Primigravid Women:

The women who is conceived for the first time.

Assumptions

1. Pain of every individual mother is unique.
2. Circular hip massage will have significant effect in reducing the level of labour pain during first stage of labour.

3. Pain is associated with cultural, religious, age, education, and occupational factors.

Hypotheses:

H_1: There will be a significant difference in the level of labour pain during first stage of labour among primigravid women before and after circular hip massage in experimental group at $P<0.05$ level.

H_2: There will be a significant difference in the pre and post-test score on the level of labour pain during first stage of labour among primigravid women in experimental and control group at $P<0.05$ level.

H_3: There will be a significant association on the level of labour pain among primigravid women with their selected demographic variables at $P<0.05$ level.

Delimitations

The study is limited to,

1. 4 weeks of data collection.
2. primigravid women who are in active phase of first stage of labour.
3. 60 subjects only.

Projected Outcome

This study is conducted to evaluate the effectiveness of circular hip massage in reducing the level of labour pain among primigravid women. Findings of this study will help the staff nurse to practice the circular hip massage in hospital and community. It can be used by the multipurpose health worker to reduce level of labour pain at peripheral level.

Conceptual Framework

Nursing profession gives a greater importance to nursing theories, general nursing art is comprised of not only rationale of reactionary actions but also deliberate action. In this study the goal is to evaluate the effectiveness of circular hip massage the labour pain during first stage of labour among primigravid women. Modified Wieden Bach Helping Art of Clinical Nursing Theory (1964) was adopted for developing conceptual framework. Modified Wieden Bach Theory view's nursing as an art based on goal oriented care and closely parallels the assessment, implementation and evaluation steps of nursing process.

Modified Wieden Bach Nursing Theory composed of three basic elements,

i. Identification

ii. Ministration

iii. Validation

i. Identification:

The theory conceptualizes nursing as the practice of viewing the women as an individual with unique experience and understanding the women's perception regarding the level of labour pain during first stage of labour.

ii. Ministration:

After identification of the women's needs, the midwives facilitate the plan of care, and implement it. In this study, the researcher applied circular hip massage on level of labour pain to the experimental group during the first stage of labour.

Modified Wieden Bach theory defines the five realities, such as (a) agent,

(b) recipient, (c) goal, (d) means of activities, (e) framework.

a) Agent :

An agent is the midwife or her delegates who are characterized by their personal attributes, capacities, capabilities, commitment and competence in nursing. In this study the agent is the researcher who is a registered nurse and midwife.

b) Recipient:

"Recipient" is the primigravid woman who is characterized by personal attributes problems, capacities and most importantly the ability to cope with the concerns or problems being experienced. In this study the recipient is the primigravid women who are in first stage of labour with labour pain.

c) Goal:

The goal is desired outcome, the nurse wishes to achieve through nursing action. In this study, the goal is to provide relaxation and distraction, through circular hip massage contributing to a sense of control and helps to lower the perception of labour pain to the primigravid women during the first stage of labour.

d) Mean:

The mean comprises the activities and devices through which the practitioner attains the goals. It includes skills, techniques, procedures and devices that are used to facilitate nursing practices.

In this study the mean is circular hip massage therapy. Records such as numerical pain intensity scale are used to assess the women's level of labour pain.

e) Framework:

The framework consists of the human, environmental, professional and organizational facilities. It consists of all the extraneous factors and facilities in the situation that affects the midwife's ability to obtain the desired outcome.

In this study the framework includes,

Human	: primigravid women in first stage of labour.
Environment	: Labour ward, lighting, noise, ventilation, humidity and cleanliness.
Professional	: Professional competency, qualification and experience.
Organizational	: Staffing pattern, nurse patient ratio, organization of materials and equipments.

iii) Validation:

Validation refers to a collection of evidence that shows womens needs that have been met and her functional ability that has been restored as a direct result of the midwives action.

In this study the researcher assessed the level of labour pain of primigravid women in the first stage of labour by using numerical pain intensity scale before and after the application of circular hip massage in the experimental group, whereas in the control group assessment of level of labour pain were recorded. Effectiveness of circular hip massage was checked through comparing the level of labour pain between the experimental and control group.

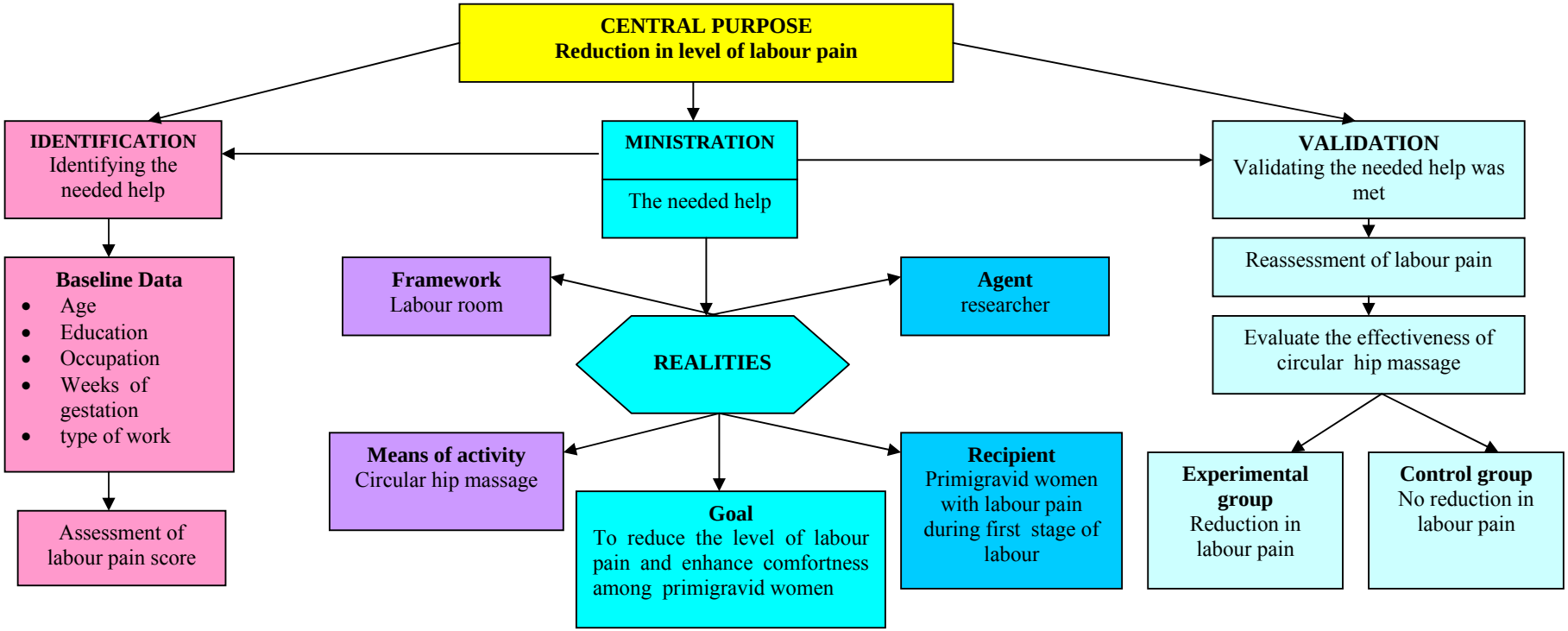


Figure -1.1: Modified Wieden Bach's Helping Art of Clinical Nursing Theory

Summary

This chapter dealt with introduction, need for the study, statement of the problem, objectives, operational definitions, assumptions, hypotheses, delimitations, projected outcome and conceptual framework.

CHAPTER – II

REVIEW OF LITERATURE

A literature review involves the systematic identification, location, scrutiny and summary of written materials that contain information on a research problem. (**Polit and Hungler, 2008)**

The researcher has divided the review of literature under the following categories as,

1. Literature related to labour pain perception.
2. Literature related to non- pharmacological approaches in reducing labour pain.
3. Literature related to massage on labour pain.
4. Literature related to effectiveness of circular hip massage on labour pain.

1. Literature related to Labour Pain Perception

Olayemi, et.al, (2009) conducted a study to assess the effectiveness on effect of ethinicity on the perception of pain among primiparturients at the University College Hospital, Ibadan. 30 samples were selected though randomization. Box numerical scale was used to assess the level of labour pain. The study reveals that Yoruba ethnic groups had a lower pain score than the mean scores of other ethnic groups, (T= -0.636) [95% CI – 0.959, - 0.313]) increased parity also reduced pain scores (-0.182 [95% CI – 0.342, - 0.022]) this shows that, the ethnicity of the parturient relative to that of the predominant ethnicity in the place of the birth has a significant effect on the perception of labour pain by the parturient.

Pirdel.M., et.al, (2009) conducted a study to assess perceived environmental stressors and pain perception during labour in Tabric Alzabra Hospital, Iran. Samples were 300 primiparous and 300 multiparous women who were admitted for normal vaginal delivery. Samples were selected through purposive sampling technique. The

intensity of pain was assessed by visual analog scale (VAS). The study finding reveals that primiparous women believed that a crowded delivery room (70%) and restriction of movement and mobility (67%) contributed to the environmental stress. Multiparous women believed that restriction of fluid intake (75%) and noise in the labour ward (84%) increased their stresses. The study result concluded that performance of routine diagnostic tests in hospitalized pregnant women, provision of invasive medical care during labour process and a noisy and the crowded environment in the labour ward influence the mother's labour experience and perception of pain.

Iris Ohel, Asnat Walfisch, et.al, (2006) conducted a clinical trial on the changes in pain threshold before, during, and after labour in the department of Obstetrics and Gynecology, Soroka University Medical Center, Israel. 40 pregnant women were included in the study. The pain threshold in 18 specific pressure points was evaluated by using a dolorimeter. Subjective pain intensity was assessed by the visual analog scale. The pain threshold was significantly higher during active phase of labour. The study result shows that there was a significant decline in pain threshold after labour as compared to the pain threshold during labour (2.507-+0.947 and 2.608+ 1.023, respectively p=0.001) and pain threshold before labour was 4.8 ± 2.7 and 2.4±2.6 at P<0.001 level. It was concluded that the pain threshold was significantly higher during labour.

Wijma, et.al, (2001) conducted a comparative study on labour pain between primiparous and multiparous women during first stage of labour in Linkoping University, Sweden. 75 Samples were selected in that 35 primiparous and 39 multiparous women were adopted. The samples were selected through randomization and data was collected by using verbal rating scale (VAS). The study result shows that primi para women reported higher level of pain than multiparous women

(t= 0.735, p= 0.01). So it was concluded that primi parous women experience more pain than multiparous women.

2. Literature related to Non- Pharmacological Approaches in Reducing Labour Pain

Findly.I, Chambertain.G, (2008) conducted a study to evaluate the effectiveness of massage on labour pain among mothers in northeast region hospital, Brazil. Samples were selected through convenience sampling technique. Samples were 40 primi parturients among which 30 were assigned to experimental group and 30 were assigned to control group. The intervention was taught during antenatal classes. The result reveals that the women, about 90% find relaxation and massage was good for pain relief.

Smith.C.A., et.al.,(2006) conducted a experimental study to evaluate the effectiveness of complementary and alternative therapies for pain management in labour, at department of obstetrics and gynaecology at Regional hospital, Taiwan. Convenience sampling technique was used to select 366 sample and grouped them into different therapies like acupuncture (n=120), oil massage (n=100), hypnosis (n=120), and music therapy (n=69). Visual analogue scale was used to assess the level of pain before and after the interventions. The study findings reveals that there was significant reduction in pain perception due to massage and hypnosis (F=132.5, at P=<0.01) level. Hence it was concluded that alternative and complementary therapies was more effective in relieving labour pain.

Rejane Marie Barbosa Davine, **(2006)** conducted a study to evaluate the effectiveness of non-pharmacological strategies on labour pain in Northeast Region Hospital, Brazil. 100 parturient women were selected through purposive sampling technique. Data was collected for a period of September 2005 to feburary 2006.

Structured interview schedule was used to collect demographic data and numerical pain intensity was used to assess the labour pain before and after intervention. 85% of the parturient women in the study found to be more benefited on non-pharmacological measures at 6, 7 and 8 cm of cervical dilatation. The‘t’ value demonstrated that t=5.25 which is significant at p = <0.01 level on three stages of labour. Hence it was concluded that non-pharmacological approaches was very effective in relieving labour pain.

Huntely A.L., Cool J.T., Ernst, E., (2003) conducted a study on complementary medicine for labour pain among primi mothers in Regional Hospital, Taiwan. Samples were 300 primi mothers who fulfill inclusive criteria. This study excluded artificially induced labour pain or trials that had other obstetric outcomes. 18 non-pharmacological approaches was used among six of these did not meet the inclusion criteria as they had artificially stimulated labour pain. The remaining 12 trials involved acupuncture (2), hypnosis (2), biofeedback (1), intracutaneous sterile water injection (4), massage (2), and respiratory autogenic training (1). The result shows that 65% of the primi mothers reported that the intensity of pain was significantly lower among massage group than the group who received transcutaneous electrical nerve stimulation at P= 0.001 and P = 0.003 respectively. The study concluded that massage was very in pain relief during labour.

Brown S.T., Douglas.C., Flood.L.A.P., (2001) conducted a retrospective descriptive study to evaluate the effectiveness of non- pharmacological pain relief techniques for labour among women at selected hospital, Iran. The sample consists of 37 primiparous and 9 multiparous women. 10 common non-pharmacological childbirth management techniques were followed. Mothers were asked to mark which techniques is very effective, are not effective in pain relief. The result shows that 85%

of the women reported that breathing techniques, acupressure and massage were found to be most effective in reducing the level of labour pain.

3. Literature related to Massage on Labour Pain

Kavitha.N.K, (2010), conducted a study to compare the effectiveness of sacral massage vs music therapy on low back pain during first stage of labour among primigravid women at a selected hospital, Bangalore. The samples were 60 primigravid women were selected through convenience sampling technique. The data was collected through structured interview schedule and numerical pain intensity scale was used. The result demonstrated 75.3% of participants suffered of low back pain during labour. One group received massage therapy and other group received music therapy. The result reveals that the mean pain scores 65.5% of the mothers were comfort with massage therapy and 45% of them were comfort with music therapy. The 't' value reveals that t=4.34 which is significant at $p<0.05$ level. It was concluded that massage was very effective in reducing the level of labour pain.

Chandra.T., (2010) conducted a Quasi experimental study to evaluate the effectiveness of Olive oil back massage on labour pain during first stage of labour among primigravid women at selected hospital, Salem. Convenience sampling technique was used to 60 primigravid women, 30 were assigned to experimental group and 30 were assigned to control group. The tool used for the study was numerical pain intensity scale. The data was analyzed by using descriptive and inferential statistics. In experimental group, mean value pain score is 4.533, which is lesser than the control group mean value is 8.5667 at 7^{th} observation. The 't' value is 8.880 which is significant at $p<0.05$ level. This finding shows that olive oil back massage was very effective in pain relief during labour.

Taghinejad .H, Delpisheh.A, Subrajiz, (2010) conducted a study to evaluate the effectiveness of massage and music therapy to relieve the severity of labour in selected hospital, Taiwan. The study participants were 60 primiparturients who were admitted in Women Health Centre Iran. The mothers were randomly assigned into two groups. The first group received massage therapy and the second group received music therapy. The researcher measured the pain intensity before and after the therapy by visual analog scale. The research study reveals that the women who received massage therapy had significantly lower labour pain at P=0.014. The intensity scores at each phase of labour (0.73 vs 1.30 in latent, 1.73 vs 2.17 in active phase and 2.17 vs 2.87 in transition phases). 87% of the women in the massage group reported that the massage was helpful in providing pain relief and psychological support, when compared to music therapy.

Latha.K,.,(2007) conducted a quasi experimental study to assess the effectiveness of ice massage on median pressure points in labour pain perception at selected Government Hospital, Rayapuram, Chennai. Samples were 90 primi mothers who were in active stage of labour. The tool used for the study was questionnaire for collecting demographic data and Visual Analogue Scale for assessing the level of pain. The result demonstrated that, the mean score was 30.5±1.17, the't' value at 9.93 is highly significant at p=< 0.01 level. This denotes there is a significant decrease in level of pain perceived by the parturient mothers following ice massage.

Khodakarami, Safarzadh and Fathizadeh, (2006) conducted a Quasi Experimental study to evaluate the effectiveness of massage therapy on labour pain among primiparous women at Regional hospital, Taiwan. 60 primiparous women were selected. Cases were randomly selected and allocated to experimental and control group. The experimental group received massage therapy and control group

received only routine care. For the experimental group massage is given on the sacrum, buttocks, shoulders, waist, foot, and hand during active phase of labour. The severity of pain was assessed by using visual analog in both the experimental and the control group before and after the intervention. The study results were compared between the experimental and control group. The study result revealed that the mean pain score were 36.66±76.20 in experimental group which shows a significant difference between mean pain severity in the first phase in massage therapy and that of the control group in the initial phase (P=0) in the beginning of transitive phase P= 0.014, and at the end of first phase (P=0.01). So it concluded that massage was effective in reducing the labour pain.

Malathi.M, (2006) done a study to evaluate the effectiveness of simple massage vs French oil massage on labour pain among primipara mothers at Government Hospital, Erode. The study design was nonequivalent factorial design.60 primiparous women were selected by convenience sampling technique The data was collected by structured interview schedule for background variables and visual analog scale for pain score assessment. The study results showed that there was a significant reduction in labour pain score among the group who received French oil massage than the simple massage, in all four observations F=117.4 ($p<0.05$), F=150.9 ($p<0.05$),F=102.1($P<0.05$)and F=39.8 ($p<0.05$) respectively. It reveals that French oil massage was very effective in reducing the level of labour pain than simple massage.

Jayabharathi. B, (2006) conducted a true experimental study to evaluate the effectiveness of selected nursing intervention massage on perception of pain during first stage of labour among primi mothers in selected hospital, Pattukottai, Tanjore District. Pre and posttest only design was adopted for this study. 60 samples were selected among which 30 were assigned to experimental group and 30 were assigned

to control group. The tools used for the study were questionnaire for demographic variables and Combined Numerical Pain Scale was used to assess the level of pain. The results showed that the pre test assessment mean score in experimental group were 5.66 ±2.33,in control group the mean score is 5.75 ± 2.43 whereas the post test assessment mean score in experimental group was 3.33± 1.86, in control group the mean value was 5.69± 2.59, hence there was an significant difference in post assessment pain perception of primi mothers showed that unpaired 't' value was 4.384 which was statistically highly significant at $p<0.001$ level during first stage of labour in experimental than in control group. The selected nursing intervention (Massage) to the primi mothers was effective in reducing their perception of labour pain.

Yildirim,G, Sahin NH, (2004) conducted a study to evaluate the effectiveness of breathing technique and nurse administered massage on the pain perception among primigravid mothers during labour who were admitted in SSK Bakirkov and Children's hospital, Turkey. The mother's who fulfill the inclusive criteria. The study involved 40 primigravid mothers, 20 in the experimental group and 20 in control group. Data was collected through interview schedule and the Visual Analog Scale is used to assess the level of pain. The investigators provided information about labour breathing technique and massage to the primigravid mothers assigned to the experimental group at the beginning of the labour. The result demonstrated that in experimental group the mean score was 7.86±0.53 whereas in control group the mean score was 7.13±0.83 and the calculated 't' value were 4.86 which is significant at $p<0.05$ level. The study findings reported that the nursing support, breathing techniques, and massage were effective in reducing the perception of pain by primigravid mothers, which is leading to an satisfactory birth experience.

Chang, et,al, (2002) conducted a randomized study to evaluate the effectiveness of massage on labour pain at selected hospital Taiwan. Samples were 60 primigravid women expected to have a normal childbirth were randomly assigned to either the experimental (n=30) and control (n=30) group. The experimental group received massage and the control group does not receive any intervention. In the experimental group, 30 women received massage for 30 minutes duration during uterine contraction. First the massage was given by the researcher and then by the partner during each of the three phases of labour. The intensity of pain between the two groups was compared in the latent phase (cervix dilated 3-4cm), active phase (5-7cm), transitional phase (8-10cm). The study finding shows that t-test demonstrated that the experimental group had significantly lower pain reactions in the three phases, in lateral phase P=0.001, active phase P = 0.002 and transitional phase P = 0.000 respectively. It concluded that massage was very effective in pain relief during labour.

4. Literature related to Effectiveness of Circular Hip Massage on Labour Pain

Lakshmi. K, (2008) conducted a study to evaluate the effectiveness of circular hip massage on labour pain in NBMM hospital, Kerala. The samples were 65 primiparturients during first stage of labour and the samples were randomly assigned through purposive sampling technique to both experimental (n=30) and control (n=30) group. The data was collected using interview and visual analogue scale in both the groups. The experimental group received circular hip massage and control group not received any intervention. The results shows that the mean score in experimental group was 2.66±0.47 whereas in control group the mean score value was 2.50±0.62 respectively and the calculated 't' test value were 3.27 which is significant in all three phases, latent phase p=0.001, active phase p=0.002, transitional phase p=0.000.The

result reveals that circular hip massage had a positive effect on pain relief and promotes a positive feeling during labour.

Hima Jacob [2008], done a study to evaluate the effectiveness of circular hip massage in reducing the level of labour pain in Government Hospital, Erode. Samples were 40 primiparturients selected through convenience sampling technique. The tool used for this study were numerical pain intensity scale. The study results shows an significant difference in the mean labour pain scores before and after circular hip massage in the experimental group t=-22.650[p<0.001]. There was also a significant reduction in the mean labour pain after circular hip massage in the experimental group than the control group t=11.273 [p<0.001]. The above findings were supported by Kimber L, [2006] where the circular hip massage had a positive effect on the pain relief and promotes a positive outcome during labour.

Jeyalakshmi, Latha Vengatesan, and Jamuna, (2008), conducted a study to evaluate the effectiveness of circular hip massage on level of labour pain at selected hospital, Chennai. The samples were 60 primiparturient women. The samples were selected by convenience sampling techniques who were admitted at Andhra Mahila Sabha, Chennai. Numerical Pain Intensity Scale was used to assess the level of labour pain. In experimental group 100% of them experienced mild level of pain after therapy. The research findings revealed that in experimental group the mean pain score were 8.60±0.49 whereas in control group the mean score was 6.33±0.71 and the mean difference was 2.26 an the 't' test value shows that 17.92 which is significant at p<0.05 level. So it can conclude that circular hip massage was effective in reducing the level of labour pain.

Pilevazadeh..et.al., (2002) conducted a study to effectiveness of circular hip massage on level of labour pain and anxiety during labour in the Joroft City Hospital, Iran. 60 primigravid women were selected and were randomly assigned to the experimental (n=30) and control (n=30) groups. Data was collected by using visual analog scale. The study results reveals that in both the groups, there was an increase in the intensity and anxiety level as labour progressed. T-test demonstrated that experimental group had significantly lower pain reaction in all three phases i.e Latent phase; p=0.000, active phases; p=0.002, transitional phase; p=0.000, and anxiety level was significantly reduced when compared to that of the control group. Therefore circular hip massage was effective in reduction of labour pain.

Summary

This chapter deals with Literature related to labour pain perception, massage and labour pain, non- pharmacological approaches in reducing labour pain and circular hip massage on labour pain

CHAPTER – III

METHODOLOGY

Methodology is a significant part of any study, which enables the researcher to logically project the research undertaken. Research methodology is the systematic way to carryout an academic study and research in flawless manner.

The chapter includes research design, population, sampling, sample size, sampling technique, development of the tool, content validity, pilot study, ethical consideration, data collection procedure, and plan for data analysis.

Research Approach

Quantitative evaluative approach was adopted for the study.

Research Design

Research design is the researcher in the selection of the samples, identification of variables, their manipulation and control, observations to be made and types of statistics to interpret the data.

Selection of the design is based on the purpose of the study. The present study was conducted to evaluate the effectiveness of circular hip massage on labour pain during the first stage of labour among primigravid women using a quasi-experimental time series design. In this design samples were selected by Non probability convenience sampling technique to the experimental and control group.

The control groups were of those primigravid women who have not received any intervention except normal nursing care, but in experimental group, they are receiving circular hip massage with regular nursing care. The researcher ensured convenience selection of samples for the experimental and control group in the present study.

Circular hip massage was the intervention that was carried among the primi gravid women in experimental group. Effectiveness of circular hip massage was measured at regular intervals.

EXPERIMENTAL	-	O_1	X_1	O_2	O_3 X_2 O_4	O_5 X_3 O_6	O_7 X_4 O_8
CONTROL	-	O_1-O_2			O_3-O_4	O_5-O_6	O_7-O_8

E - Experimental group

C - Control group

X - Intervention

O_1, O_3, O_5, O_7 - Pre-test

O_2, O_4, O_6, O_8 - Post-test

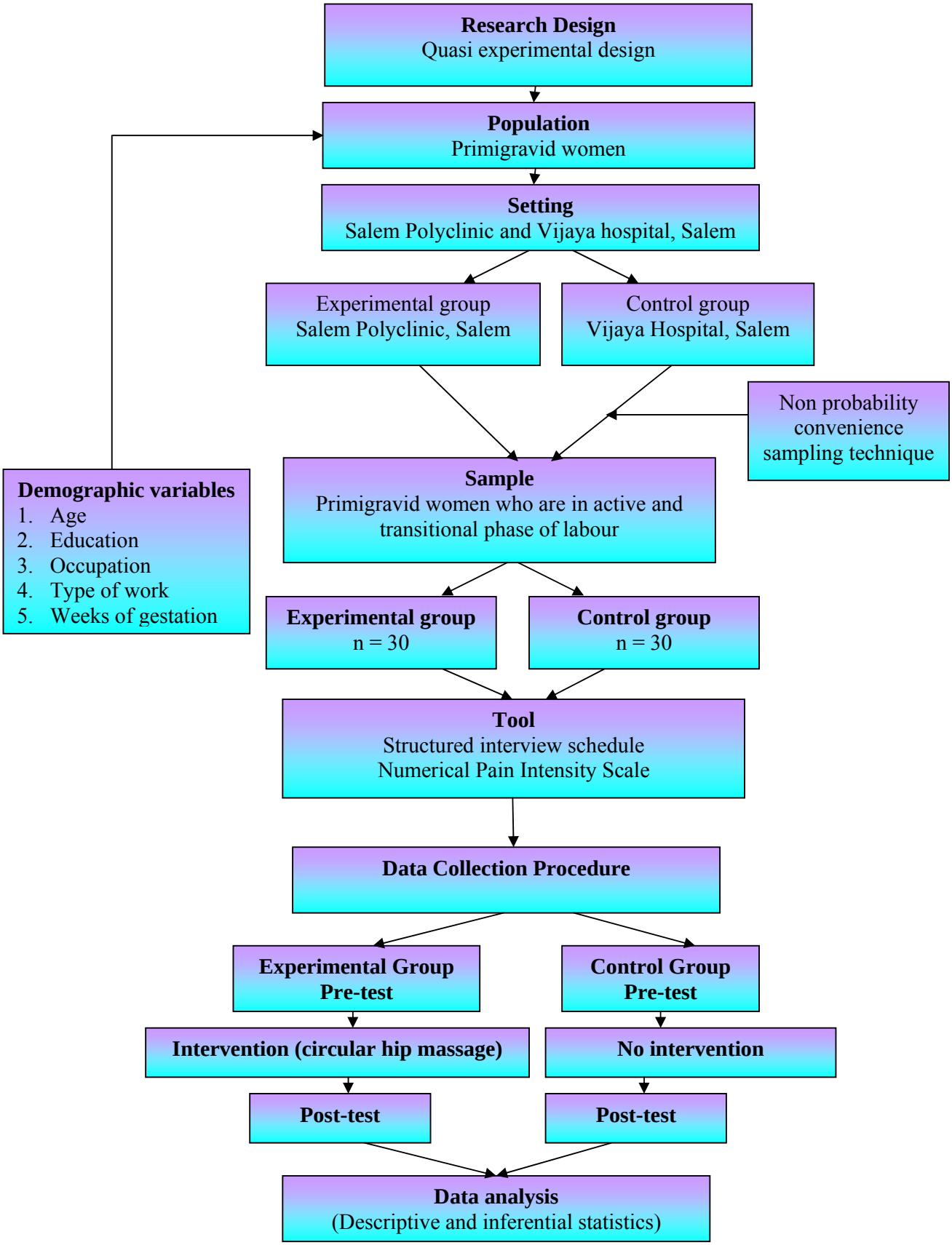


Figure-3.1: Schematic Representation of Research Design.

Population

Population may be classified into two types,

1. Accessible population
2. Target population

Target population

It refers to the population that the researcher wishes to make it generalization. In this research the target population is the primi gravid women.

Accessible population

Refers to the aggregate of cases which confirm to the designed criteria. In this research, the accessible populations were the primigravid women who were in the first stage of the labour in Salem Polyclinic and Vijaya hospital, Salem.

Description of the Setting

Setting is the general location and condition in which data collection takes place for the study **(Polit, D.F., and Hungler, 2003)**.

The study was conducted in Salem Polyclinic and Vijaya Hospital, Salem. Every day about 15-22 cases were admitted for labour. In that 15-18 were primigravid women.

Sampling

Sampling refers to the process of selection of population to represents the entire population. **(Polit and Hungler, 1997)**

- **Sample**

  Polit and Hungler, (1998) states that sample consist of the subset of the population selected to participate in the research study. The samples in the study were the primigravid women in first stage of labour with 4 cm dilatation of the cervix.

- **Sample size**

The sample size was determined based on the type of the study, variables being studied, the statistical significance required, availability of sample and feasibility of conducting the study. The sample size for the study was arbitrarily decided to be 60, in that 30 for experimental group and 30 for control group. Factors like nature of the study, availability of the sample, time, money and material were considered while deciding the sample size.

- **Sampling technique**

In this study, convenience sampling technique was used to select sample according to the sample selection criteria .It entails the use of the most readily available persons based on the criteria as subject in the study.

- **Criteria for sample selection**

In sampling criteria the researcher specifies the characteristics of the population under the study by detailing the inclusion and exclusion criteria

Inclusion criteria

Primi gravid women with,

1. 37 – 40 completed weeks of gestation.
2. Who were undergoing normal vaginal delivery.
3. 4 cm dilatation of the cervix.

Exclusion criteria

Primi gravid women with,

1. High risk Pregnancy.
2. Who are not willing to participate.

Variables

According to **Polit (1999)** variables are the conditions or characteristics that the investigator manipulates, controls, or observes. The three categories of variables discussed in the present study are

Independent variable: Circular hip massage.

Dependent variable: Level of labour pain.

Demographic variables: Age, education, type of work, occupation, weeks of gestation.

Development of the Tool

The tool is a written device that the researcher uses to collect the data. After a careful review of literature, the researcher used the Numerical Pain Intensity Scale to asses the level of pain. However, the demographic variables are identified by the Structured Interview Schedule.

Description of the Tool

The study consists of two sections,

Section – 1: Demographic variables

It consists of 5 items related to personal variables. Verbal responses were obtained from the primigravid women regarding age, education, occupation, type of work, and weeks of gestation.

Section – 2: Numerical Pain Intensity Scale

It consists of a Numerical Pain Intensity Scale ranging from '0' to no pain and 10 to worst possible pain which is used to assess the level of labour pain among primi gravid women.

Scoring Procedure

Table – 3.1: Scoring Procedure

Score	Level of pain
0	No pain
1 – 3	Mild pain
4 – 6	Moderate pain
7 – 9	Severe pain
10	Worst possible pain

Level of pain will be assessed before and after interventions. The pregnant women will place a score ranging from 0 to 10 in the pain scale after the verbalizations of women about her level of labour pain.

Validity and Reliability of the Tool

Validity:

Polit (1998) says that, validity refers to the degree to which an instrument measures what it is supposed to be measured. The entire tool was validated by 7 Experts, including 1 Gynaecologist, 1 Physiotherapist, 5 Nursing Experts. Experts were requested to judge the tool for its content, clarity, sequence, relatedness and meaningfulness. Suggestions given by the experts were accepted and the tool was modified. The tool which was developed in English was translated into Tamil.

Reliability:

Reliability of an instrument is the degree of consistency measures that attribute it is supposed to be measured. **(Polit and Hungler, 1998)**

The reliability of the tool was done by interrater method r = 0.98.

Pilot Study

Pilot study was conducted to determine the feasibility of the study and modify the instrument and to establish the sample size. Formal written permission was obtained from Salem polyclinic, Salem from 27.06.2011 to 02.07.2011. 6 primigravid women were selected through convenience sampling technique among which 3 primigravid women in experimental group and 3 in control group. After obtaining prior permission from primigravid women the demographic variables were obtained by using Structured Interview Schedule and Numerical Pain Intensity was used to assess the level of labour pain during first stage of labour. In experimental group circular hip massage was given and control group no intervention was given. Tool was feasible and primi gravid women easily followed the instruction and co-operated well. It also helped the investigator to select suitable statistical methods. The researcher did not find any difficulty during pilot study. Hence, it was continued in the main study.

Method for Data Collection

Ethical consideration

Prior to collection of data written permission was obtained from the Managing Director of Salem Polyclinic, and Vijaya Hospital, Salem.

Informed consent was obtained from primigravid women.

Data collection procedure

The data was collected for a period of 4 weeks from 13.07.11 to 07.08.11 in Salem polyclinic and Vijaya Hospital, Salem. The researcher visited the labour room and selected the primigravid women who were in First Stage of Labour pain by non-probability convenience sampling technique. 60 samples were selected based on inclusive criteria, out of which 30 women comprised of experimental group and 30

were in control group. Structured interview schedule was used to collect demographic data and Numerical Pain Intensity Scale was used to assess the level of labour pain. Informed consent from samples was obtained. The researcher done a study to control group for 2 weeks period where the intervention was not given. In experimental group circular hip massage was given in an upward and downward circular stroke on either side of the sacral region during first stage of labour for 15 minutes duration with interval of 1 hour for 4 times. Before and after the intervention the level of labour pain was assessed using Numerical Pain Intensity Scale. The data collected was analysed and interpreted.

Plan for Data Analysis

A master sheet was prepared with responses given by the primigravid women and the data were analysed by using descriptive and inferential analysis.

Summary

This chapter dealt with the methodology of the study. It consists of research approach, design, population, setting, sampling, variables, description of tool, validity and reliability, method of data collection, pilot study and plan for data analysis.

CHAPTER – IV

DATA ANALYSIS AND INTERPRETATION

Analysis is a process of organizing and synthesizing data in such a way that the research question can be answered and tested. **(Polit and Hungler, 2003)**

The term analysis refers to the computation of certain resources along with searching for patterns of relation that exists among data groups. Analysis of data in a general way involves a number of closely related operations, which are performed with the purpose of summarizing the collected data and organizing them in such a manner that they answer the research questions. **(Kothari C.R, 1990)**

This chapter will present the Quasi experimental study attempted to evaluate the effectiveness of circular hip massage on labour pain during first stage of labour among primigravid women in selected hospital, Salem.

Data collected and analysed by following,

Section-A:

Distribution of primigravid women according to their selected demographic variables in experimental and control group.

Section –B:

a. Distribution of primigravid women according to the pre and posttest score on level of labour pain during first stage of labour in experimental group.
b. Distribution of primigravid women according to the pre and posttest score on level of labour pain during first stage of labour in control group.

Section-C:

a. Mean, standard deviation, mean difference on level of labour pain among primigravid women in experimental and control group.

Section-D: Hypotheses testing

a) Mean, standard deviation and 't' value on level of labour pain during first stage of labour among primigravid women before and after circular hip massage in experimental group.

b) Effectiveness of circular hip massage on level of labour pain among primigravid women in experimental and control group.

c) Association on level of labour pain among primigravid women with their selected demographic variables in experimental and control group.

Section-A

Distribution of primigravid women according to their selected demographic variables in experimental and control group.

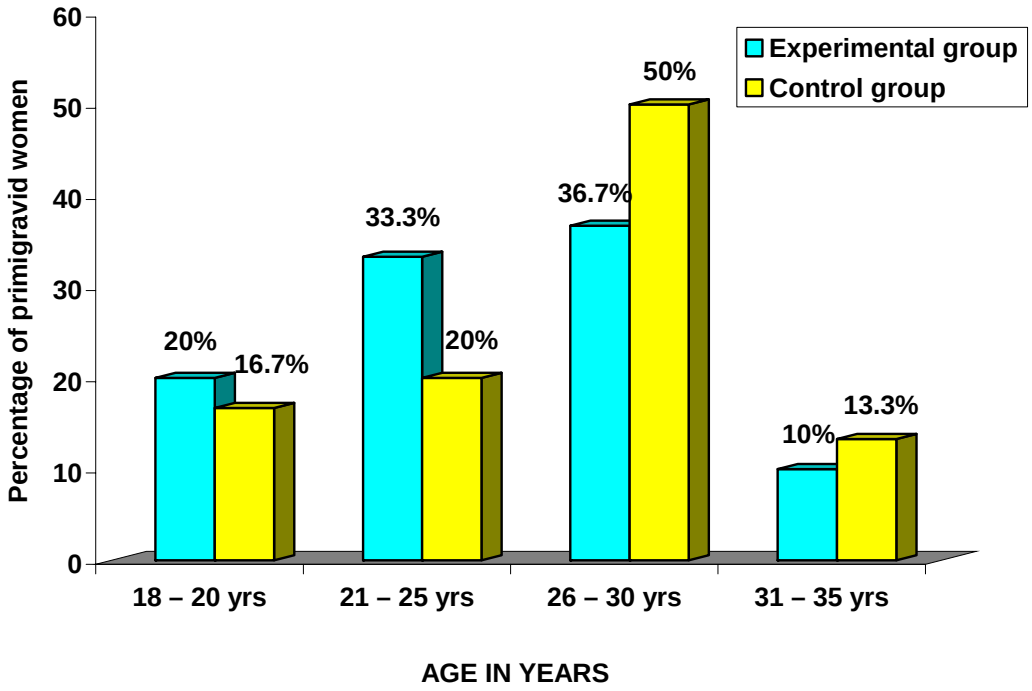


Figure-4.1: Percentage distribution of primigravid women according to their age in years.

The above figure shows that in experimental group 11(36.7%) of them are in the age group 26-30 years and in control group 15(50%) of them are in the age group 26-30 years.

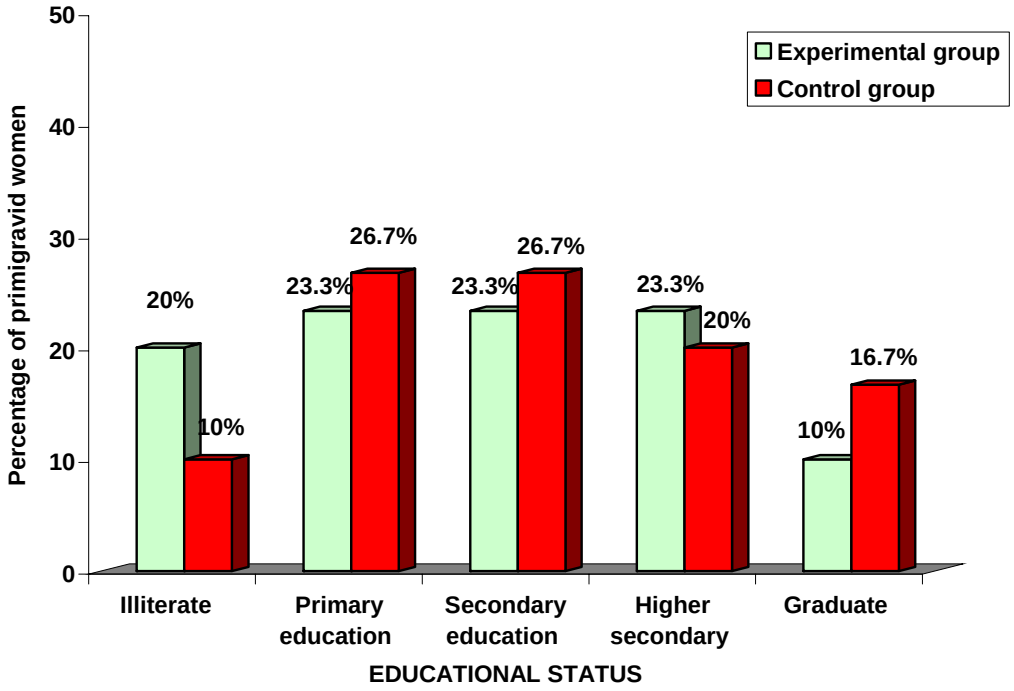


Figure-4.2: Percentage distribution of primigravid women according to their educational status.

The above figure shows that in experimental group 7(23.3%) of them has higher secondary education, whereas in control group 8(26.7%) of them has secondary education.

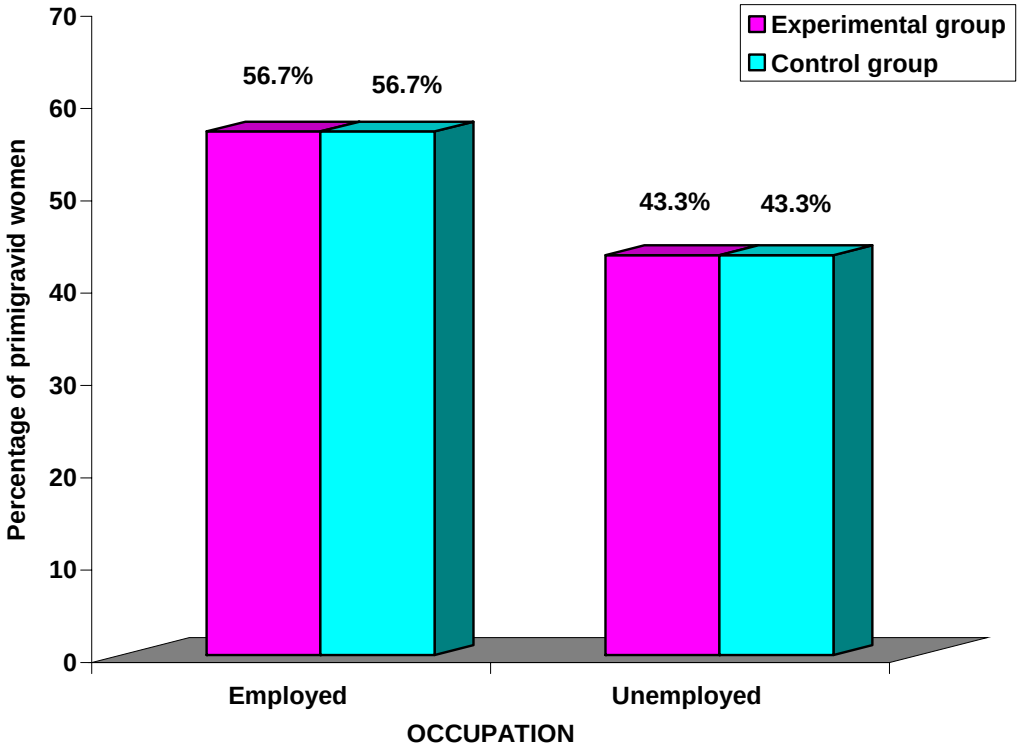


Figure-4.3: Percentage distribution of primigravid women according to their occupation.

The above figure shows that in experimental group 17(56.7%) of them are employed and in control group 17(56.7%) of them are employed.

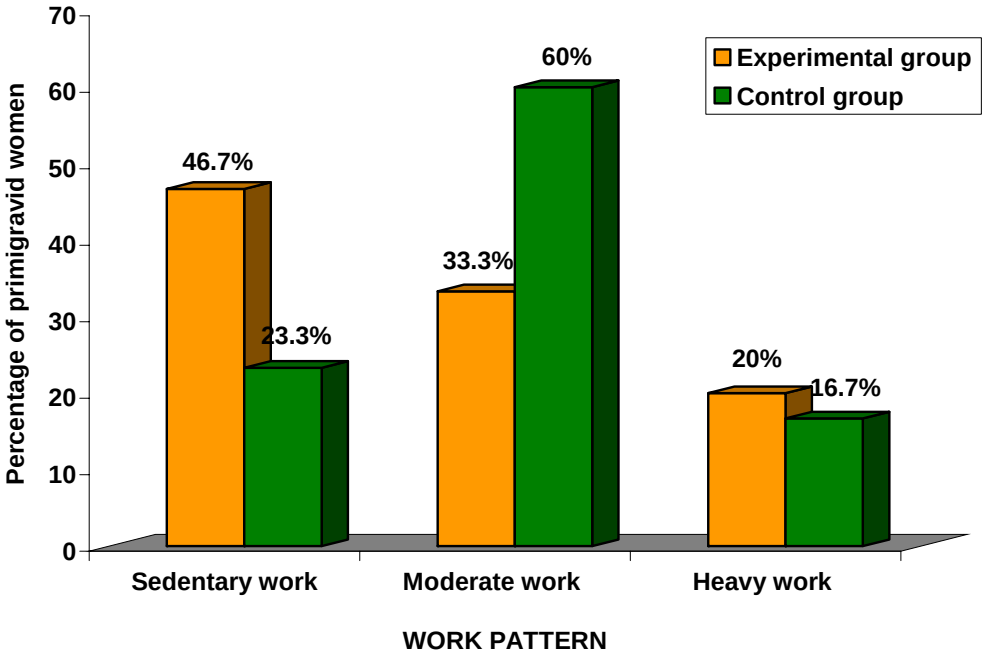


Figure-4.4: Percentage distribution of primigravid women according to their work pattern.

The above figure shows that in experimental group 14(46.7%) of them are sedentary workers and in control group 18(60%) of them are moderate workers.

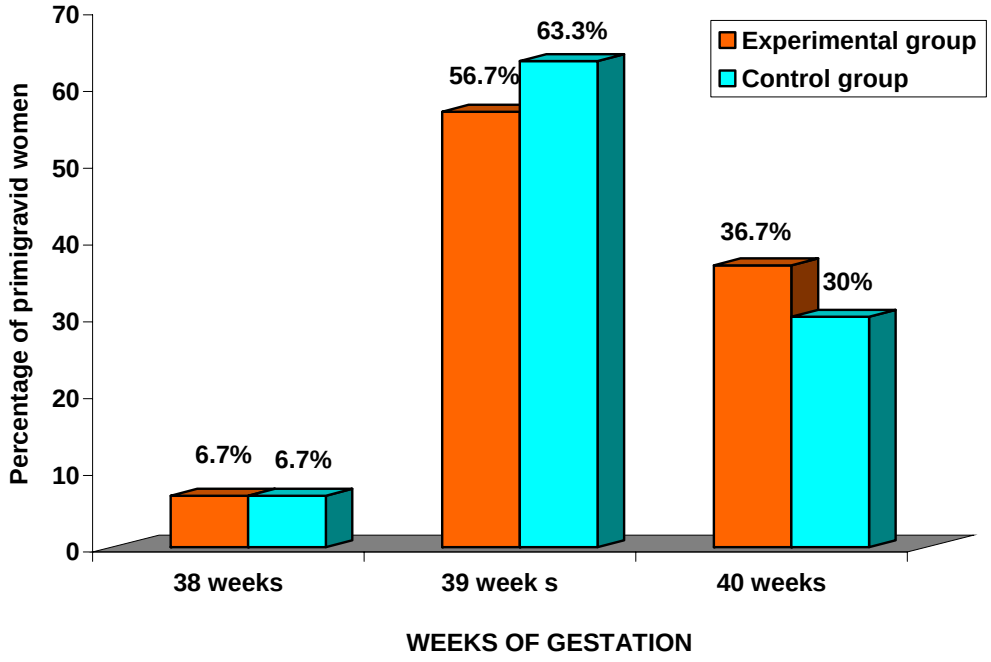


Figure-4.5: Percentage distribution of primigravid women according to their weeks of gestation.

The above figure shows that in experimental group 17(56.7%) of them are in 39 weeks of gestation, whereas in control group 19(63.3%) are in 39 weeks of gestation.

Section-B

a) Distribution of primigravid women according to the pre and posttest score on level of labour pain during first stage of labour in experimental group.

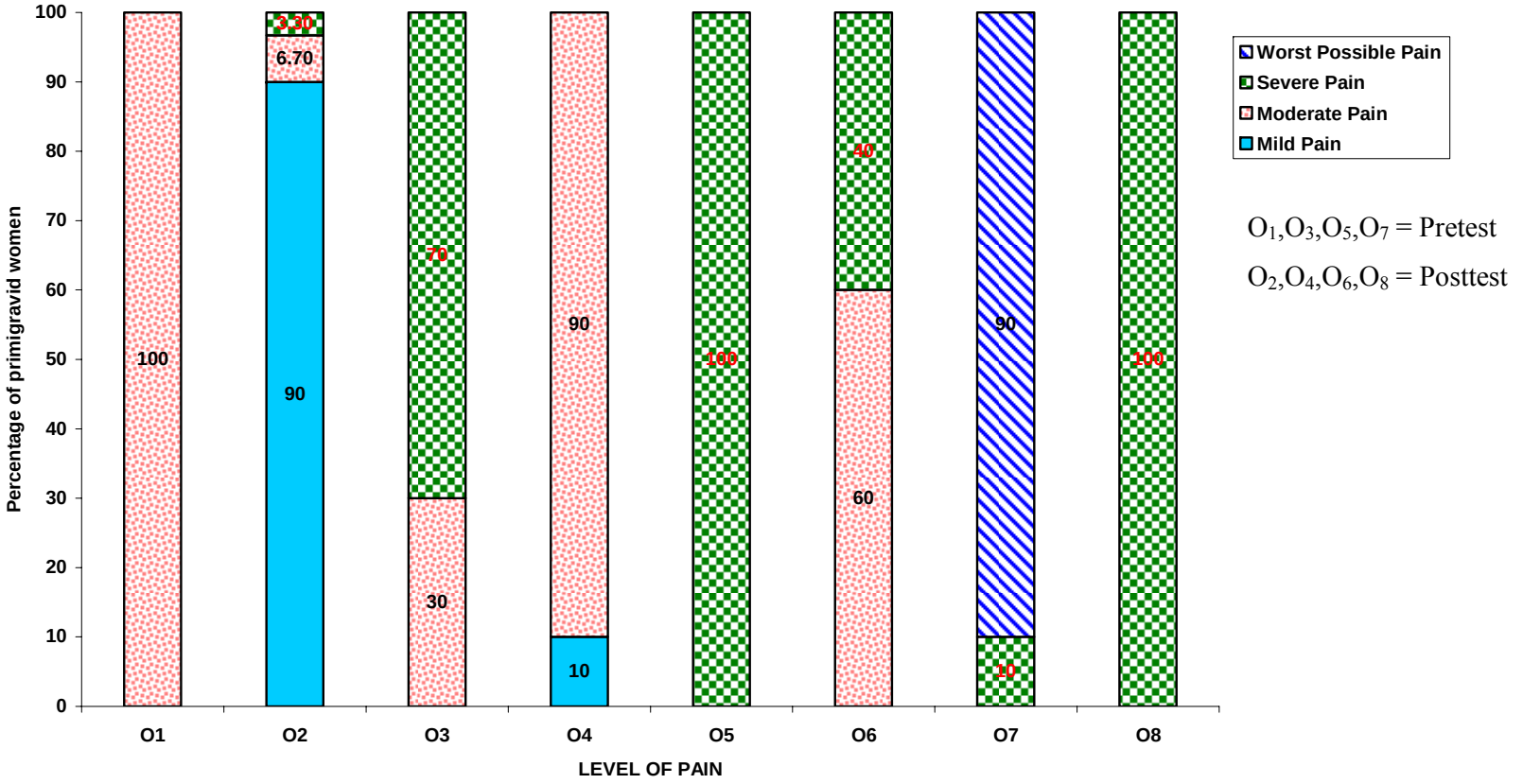


Figure-4.6: Percentage distribution of primigravid women according to the pre-test and post-test score on level of labour pain during first stage of labour before and after circular hip massage in experimental group.

The above figure shows that in experimental group the pretest score on level of labour pain before intervention (O_1, O_3, O_5, O_7) were 30(100%) had moderate pain, 21(70%) had severe pain, 30(100%) had severe pain and 27(90%) had worst possible pain respectively.

Whereas the post-test score on level of labour pain (O_2, O_4, O_6, O_8) were 27(90%) had mild pain, 27(90%) had moderate pain, 18(60%) had moderate pain and 30(100%) had severe pain respectively.

b) Distribution of primigravid women according to the pre and posttest score on level of labour pain during first stage of labour in control group.

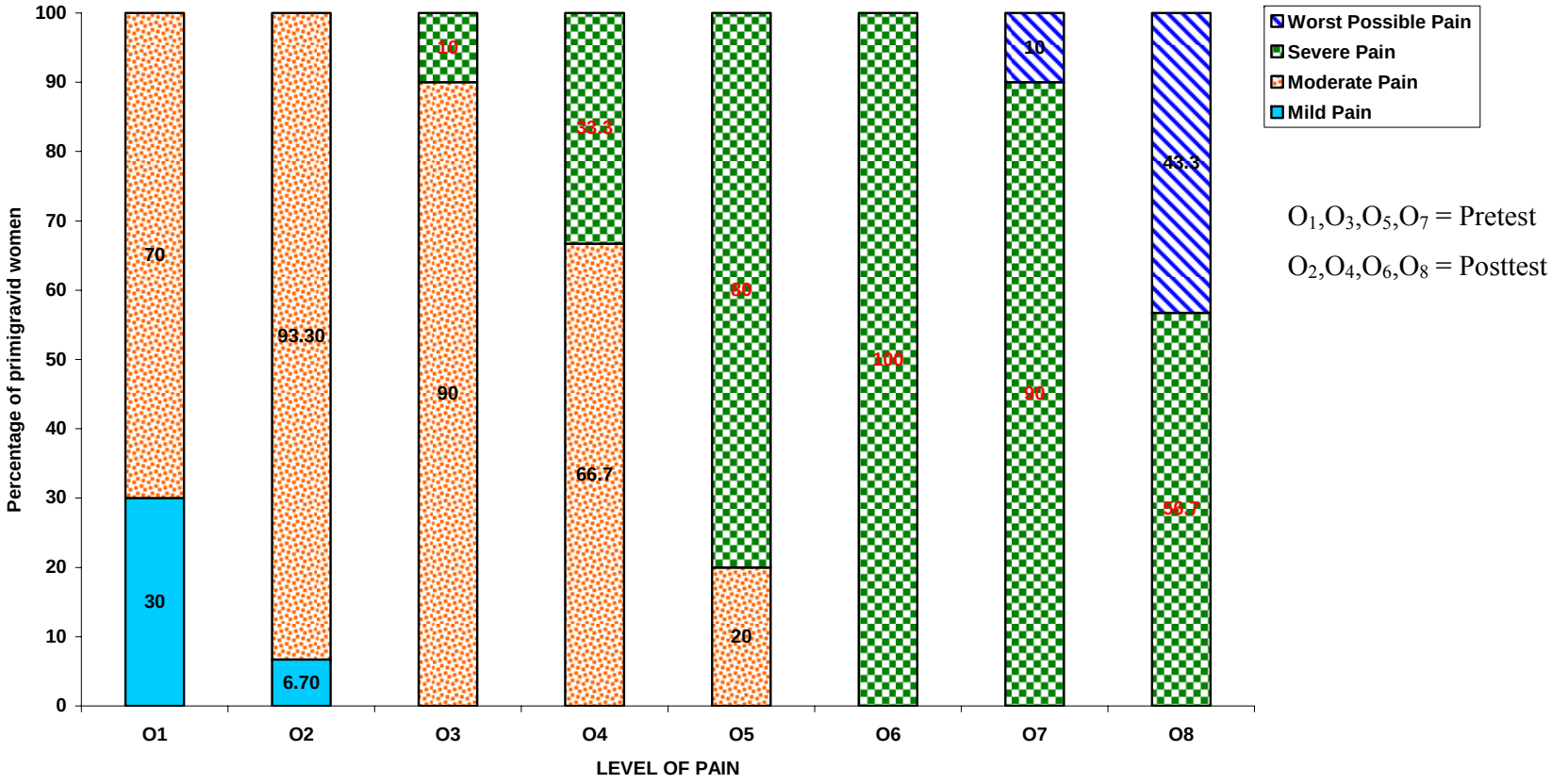


Figure-4.7: Percentage distribution of primigravid women according to the pre-test and post-test score on level of labour pain during first stage of labour in control group

The above figures shows that pre-test score on control group the level of pain in (O_1, O_3, O_5, O_7) were 21(70%) had moderate pain, 27(90%) of them had moderate pain, 24(80%) of them had severe pain, and 27(90%) of them had severe pain respectively.

Whereas the post-test score on level of labour pain in (O_2, O_4, O_6, O_8) were 28(93.3%) had moderate pain, 20(66.7%) had moderate pain, 30(100%) had severe pain, and 17(56.7%) had worst possible pain respectively. This study findings reveals that the level of labour pain is reduced in experimental group than control group among primigravid women.

Section – C

a) Mean, standard deviation, mean difference on level of labour pain during first stage of labour among primigravid women in experimental and control group.

Table-4.1:

Mean, SD and mean difference on level of labour pain in experimental and control group.

n=60

Series of observation	Experimental group (n=30)			Control group (n=30)		
	Mean	**SD**	**Mean difference**	**Mean**	**SD**	**Mean difference**
O_1	5.10	0.75	2.00	3.80	0.66	0.23
O_2	3.10	0.30		4.03	0.80	
O_3	6.90	0.88	2.33	5.50	0.77	0.13
O_4	4.56	0.77		5.63	0.85	
O_5	8.50	0.50	2.16	7.20	0.80	0.06
O_6	6.33	0.60		7.26	0.86	
O_7	9.90	0.30	2.33	8.83	0.64	0.16
O_8	7.56	0.50		9.00	0.58	

O_1,O_3,O_5,O_7 = Pretest

O_2,O_4,O_6,O_8 = Posttest

The table shows that the mean difference of experimental group values are 2.00, 2.33, 2.16, and 2.33 where as in control group values are 0.23, 0.13, 0.06 and 0.16 respectively.

Section-D

Hypotheses Testing

a) Mean, standard deviation and‘t’ value on level of labour pain during first stage of labour among primigravid women before and after circular hip massage in experimental group.

Table-4.2: Mean, standard deviation and‘t’ value on level of labour pain before and after circular hip massage in experimental group

n=30

Series of observation	Experimental group (n=30)		
	Mean	**SD**	**‘t’ value**
O_1	5.10	0.75	15.76*
O_2	3.10	0.30	
O_3	6.90	0.88	16.85*
O_4	4.56	0.77	
O_5	8.50	0.50	25.73*
O_6	6.33	0.60	
O_7	9.90	0.30	26.65*
O_8	7.56	0.50	

*** significant at p<0.05 level; table value – 1.961; df- 59**

O_1,O_3,O_5,O_7 = Pretest

O_2,O_4,O_6,O_8 = Posttest

The above table shows that the ‘t’ value on level of labour pain before and after circular hip massage was 15.76, 16.85, 25.73, 26.65, respectively. Hence H_1 was retained.

b) Effectiveness of circular hip massage on level of labour pain during first stage of labour among experimental and control group.

Table-4.3:

Mean, standard deviation and 't' value on level of labour pain during first stage of labour among primigravid women in experimental and control group

n=60

Series of observation	Experimental group (n=30)			Control group (n=30)		
	Mean	**SD**	**'t' value**	**Mean**	**SD**	**'t' value**
O_1	5.10	0.75	15.76*	3.80	0.66	1.88
O_2	3.10	0.30		4.03	0.80	
O_3	6.90	0.88	16.85*	5.50	0.77	1.68
O_4	4.56	0.77		5.63	0.85	
O_5	8.50	0.50	25.73*	7.20	0.80	1.43
O_6	6.33	0.60		7.26	0.86	
O_7	9.90	0.30	26.65*	8.83	0.64	1.54
O_8	7.56	0.50		9.00	0.58	

*** significant at $p<0.05$ level; table value – 1.961; df- 59**

O_1,O_3,O_5,O_7 = Pretest

O_2,O_4,O_6,O_8 = Posttest

The table shows that the 't' value of experimental group were 15.76, 16.85, 25.73 and 26.65 where as in control group were 1.88, 1.68, 1.43 and 1.54 respectively. Hence H_2 is retained. Hence it is concluded that circular hip massage is very effective in reducing the level of labour pain.

c) Association on level of labour pain among primigravid women with their demographic variables in experimental and control group.

Table-4.4:

Association on level of labour pain among primigravid women in experimental and control group with their demographic variables.

n=60

Demographic variables		Experimental group			Control group		
		df	**χ^2**	**Table value**	**df**	**χ^2**	**Table value**
1. Age in years	a. 18 – 20 yrs b. 21 – 25 yrs c. 26 – 30 yrs d. 31 – 35 yrs	3	1.530	7.81	3	5.417	7.81
2.Educational Status	a. Illiterate b. Primary education c. Secondary education d. Higher secondary e. Graduate	4	6.077	9.48	4	3.750	9.48
3.Occupation	a. Employed b. Unemployed	1	6.212*	3.84	1	0.136	3.84
4. Work pattern	a. Sedentary work b. Moderate work c. Heavy work	2	2.086	5.99	2	3.175	5.99
5. Weeks of gestation	a. 38 weeks b. 39 weeks c. 40 weeks	2	6.114*	5.99	2	1.363	5.99

The data presented in Table 4.4 shows that, in experimental group occupation and weeks of gestation had a significant association with the level of labour pain and the other variables like age, work pattern and educational status had no significant association with the level of labour pain during first stage of labour. Whereas in control group there was no significant association between selected demographic variables and level of labour pain in first stage of labour. Hence H_3 is retained only for occupation and weeks of gestation in experimental group.

Summary

In this chapter the investigator discussed about distribution of primi gravid women according to their demographic variables, level of labour pain, mean and standard deviation comparison of effectiveness of circular hip massage between experimental and control group and association with their selected demographic variables.

CHAPTER – V

DISCUSSION

The primary purpose of this study was to compare the effectiveness of circular hip massage on labour pain during first stage of labour among primigravid women at selected hospital, Salem.

Description of demographic variables

- In experimental and control group 11(36.7%) and 15(50%) of primigravid women were in the age group of 26-30 yrs. This findings was supported by **Jammuna (2008),** conducted a study to evaluate the effectiveness on massage on labour pain, which reported that 13(43.3%) and 14(46.67%) of them belongs to the age group 26-30 years.
- In experimental and control group 7(23.3%) and 8(26.7%) completed their higher secondary education. These findings were supported by **Jammnua Rani (2010),** conducted a study to evaluate the effectiveness on massage on labour pain. She reported that 50% of the mothers had higher secondary education whereas it concluded that most of the mothers are educated.
- Distribution of primigravid women according to their in experimental and control group 17(56.7%) and 17(56.7%) of women's were employed. These findings was supported by **Lavanya.B**, (2008) conducted a study on circular hip massage on labour pain, in which 15(86.7%) and 20(83.3%) were employed.
- In experimental group 14(46.7%) were sedentary workers and in control group 18(60%) of them were moderate workers. The findings was supported by **Lakshmi** study (2010) done a study to evaluate the effectiveness on circular hip massage on labour pain during first stage of labour, in which 14(46.67%)

of women were sedentary workers and in control group 20(83.3%) were moderate workers.

- In experimental group 17(56.7%) were in 39 weeks of gestation, and in control group 19(63.3%) of mothers were in 40 weeks of gestation.

The first objective of the study was to assess the level of labour pain among primigravid women in experimental group and control group.

Distribution of primigravid women according to their level of labour pain in control group (O_1) 21(70%) of primigravid women had moderate pain and in post test 28(93%) of primigravid mother had moderate pain, in posttest no change was found. In experimental group before intervention (O_1) 30(100%) had moderate pain, whereas after intervention (O_2) 27(90%) had mild pain.

The second objective of the study was to evaluate the effectiveness of circular hip massage on level of labour pain among primigravid women in experimental group.

The mean difference of experimental group (circular hip massage) value were 2.00, 2.33, 2.16, and 2.33 respectively, where as in control group values were 0.23, 0.13, 0.06 and 0.16 respectively.

In experimental group the independent 't' value of 1^{st}, 2^{nd}, 3^{rd} and 4^{th} intervention was 15.76, 16.85, 25.73 and 26.65, which is significant at $P<0.05$ level. This shows significant difference between the two groups at $P<0.05$ level. So, it is concluded that circular hip massage was effective in reducing the level of labour pain.

Lavanya, B, **(2008)** conducted a study on effectiveness of circular hip massage on labour pain among primigravid women in labour admitted in Government Hospital, Tiruvannamalai. 60 primigravid mothers were selected and assigned to both the experimental and control group. Numerical pain intensity scale was used to assess

the level of labour pain. In non-intervention group (100%) of the mothers experienced severe to worst possible pain after 4cm cervical dilatation. It was found that none of the mothers had worst pain in massage therapy group. The study revealed that the mean score of pain had a significant difference between the intervention and non-intervention group at different cervical dilatation. The study concluded that massage therapy as an eminent one non pharmacological cost effective and harmless pain minimizing method.

Mrs.Chandra, **(2009)** has conducted a study to assess the effectiveness of olive oil back massage therapy upon the low back pain of primiparturients mothers during first stage of labour. The result of the study was majority of the mothers (90%) in the experimental group were adequately satisfied with olive oil back massage therapy during first stage of labour.

The present study findings were supported by the studies conducted by **Ms.Chandra (2009)**, **Lavanya. B**, **(2008),** which shows circular hip massage, is effective in reduction of labour pain during first stage of labour.

The researcher observed that circular hip massage was effective in reducing the level of labour pain, by blocking the pain impulses and releasing the endorphins that act as a natural pain killer. Hence circular hip massage is considered as the finest technique in reducing the labour pain.

The third objective of the study was to associate the level of labour pain among experimental and control group of primigravid women with selected demographic variables.

There was significant association found between the level of labour pain among experimental group with their selected demographic variables was occupation and weeks of gestation, whereas in control group there is no significant association

was found with their selected demographic variables. The present study was supported by **Hima Jacob, (2009)** results showed that weeks of gestation and occupation had significant association with selected demographic variables whereas in control group there is no significant association with their selected demographic variables.

Summary

The discussion was made in this chapter based on the objective of the present study and it is related with similar studies conducted by other investigator. The present study concluded that circular hip massage therapy reduces labour pain among primigravid women. It is simple, non-pharmacological cost effective harmless and pain relieving therapy.

CHAPTER – VI

SUMMARY, CONCLUSION, IMPLICATIONS AND RECOMMENDATIONS

A quasi experimental design was adopted to evaluate the effectiveness of circular hip massage on labour pain during 1st stage of labour among primigravid women. The study was conducted from 13.07.11 to 07.08.11 at Salem Polyclinic and Vijaya hospital Salem. Sixty primigravid women were selected by Non-probability convenience sampling technique.

A Structured Interview Schedule was used for data collection, it consists of two parts.

Section – 1: Demographic variables

It consists of 5 items related to personal variables. Verbal responses were obtained from the primigravid women regarding age, education, occupation, type of work, and weeks of gestation.

Section – 2: Numerical pain intensity scale

It consists of a Numerical Pain Intensity scale ranging from '0' to no pain and 10 to worst possible pain which is used to assess the level of labour pain among primi gravid women.

The Major findings are summarized as follows;

Demographic profile of the primigravid women shows that,

- In experimental 11(36.7%) of them belong to the age group 26-30 years, and control group and 15(50%) of primigravid women were in the age group of 26-30 yrs
- In experimental group 7(23.3%) had higher secondary education, whereas in control group 8(26.7%) of them had secondary education.

- In experimental group 17(56.7%) of them are employed whereas in control group 17(56.7%) of them are employed.
- In experimental group 14(46.7%) of them are sedentary workers, whereas in control group 18(60%) of them are moderate workers.
- In experimental group 17(16.7%) of them are in 39 weeks of gestation, whereas in control group 19(63.3%) of them are in the age group 40 weeks gestation.
- In experimental group the independent 't' value of 1^{st}, 2^{nd}, 3^{rd} and 4^{th} intervention was 15.76, 16.85, 25.73 and 26.65, which is significant at $P<0.05$ level. This shows significant difference between the two groups at $P<0.05$ level. So, it is concluded that circular hip massage was effective in reducing the level of labour pain. Hence, hypothesis H_2 was retained at $p<0.05$ level.
- There was significant association ($p< 0.05$ level) found between the level of labour pain among experimental group with their selected demographic variables was occupation and weeks of gestation. It can be concluded that there is an significant association between the level of labour pain during ^{1st} stage of labour among primigravid women with their selected demographic variables. Therefore Hypothesis H_3 was retained at $P<0.05$ level only for experimental group.

Conclusion

The majority of women who deliver vaginally, experience some degree of pain and discomfort before delivery. Massage therapy is simple, easy technique to implement and most acceptable way to tackle pain among primigravid women with labour pain. The findings of the study indicated that the circular hip massage therapy

was very effective on reducing the level of labour pain during first stage of labour among primigravid women.

Implications

Nursing practice:

- Circular hip massage classes can be conducted in hospital and maternity centre.
- Circular hip massage can be included in parenthood class.
- Midwives can plan the goal of nursing management and enhance the nurse patient relationship and sense of well being to the mother through the development of mutually agreed goals.
- Massage therapy should be made an integral part of pain relief in the management of labour pain.

Nursing Education :

- It is important to have educational programme on circular hip massage to all staffs and students who work in labour wards.
- Nurse educators should encourage nursing students to utilize massage therapy as measure for the labour pain reduction.
- In service education programme should be conducted for nursing personnel and help nurses to gain knowledge and reduction of the labour pain through massage therapy.

Nursing Administration:

- The nurse administrator coordinates her work along with the staffs, to encourage the antenatal women for the cooperation of circular hip massage in first stage of labour.

- Midwifery department should have policy decision to use massage therapy as one of the essential nursing activity to reduce the labour pain.
- Nurse administrator should organize inservice educational programme regarding circular hip massage in first stage of labour for pregnant women who is in labour.

Nursing Research:

- Nursing research has to be done to find out various innovative methods on massage to reduce labour pain.
- The study will be a valuable reference material for future researcher.

Limitations:

- Women who had less than four observations or more than four observations were excluded from this study.

Recommendations:

Recommendations for further research includes,

- A similar study can be conducted with other types of hip massage on labour pain.
- A comparative study can be conducted between primigravid and multigravid women on effectiveness of circular hip massage during labour pain.
- A similar study can be done using the large sample primigravid women.

Summary:

The chapter dealt with summary, conclusion, nursing implications, and recommendations.

BIBLIOGRAPHY

Book Reference:

- Basavantappa .B.T, (1998). *Nursing Research*, (1st edition). Mumbai, Jaypee Brothers Medical Publishers.
- Bennet. R.V, Brown, L.K, (2001). *Myles Textbook for Midwives*, (13th edition). London Churchill Livingstone.
- Bobak, I.M, Lowdermilk, D.L., Jensen, M.D, (1995). *Maternity Nursing*, (4th edition). Toronto, Mosby Publishers.
- Dawn.C.S, (1995). *Textbook of Obstetrics and Neonatology*, (13th edition). Culcutta.
- Henderson,C., Macdonald.S, (2004). *Mayes Midwifery a Textbook of Midwives*, (13th edition), London Baillaire Trindall.
- Lucinda Liofell, (2001). *The Textbook of Massage, (*2nd edition). Simon and Schuster, New York.
- Lynna, Y.C, Joan.C.E, (2005). *Maternity Nursing Care*, (1st edition). Australia, Thomson Delmar Learning Maternity Nursing Care.
- Mahajan, B.K, (1997). M*ethods in Biostastics*, (6th edition). New Delhi, Jaypee Brothers.
- Padubidri V. Ela Anand, (2006). *Textbook of Obstetrics*, B.I.Publication, New Delhi.
- Pillitteria, (2007). *Maternal Child Health Nursing*, (5th edition). Philadelphia, Lippincott Williams and Wilkins.
- Polit and Hungler, (1991). *Essentials of nursing research*. (4th edition). Lippincott Publishers.

Journal Reference:

- Burns et al., Oil massage in labour. *The Journal of Alternative and Complementary Medicine*, 6(2), 141-147.
- Chang.M.Y, et al, (2002). Massage on Pain and Anxiety During Labour, *Journal of Advanced Nursing,* 38(1), 68-73
- Iris Ohel, (2006). Changes in Pain Threshold before, during and after labour, *Journal of Obstetrics and Gynaecological Nursing*, 132(1), 04-108.
- Jeyalakshmi, et.al, (2008). Olive Oil Message Therapy upon the Low Back Pain of Parturient Mothers, *Nightingale Nursing Times*, 2, 48-51.
- Khodakarami.N, A. Safazadeh, et.al, (2005). Effectiveness of massage therapy on labour pain, *Journal of Midwifery Research Nursing*, 10(3), 30 -32.
- Kimber. L, et.al, (2008). Massage Therapy for Maternal Pain and Anxiety in Labour, *European Journal of Pain*, 112(8), 981-989.
- Kimber.L, (2006). Various Massage Technique During First Stage of Labour, *European Journal of Pain*, 2(1), 982-986.
- Malathi, (2009). Back Massage On Labour Pain During First Stage Of Labour, *Society of Midwives.*
- Olyemi. O, et,al, (2005), Determinants Of Pain Perception In Labour Among Primi-Parturients, The University College Hospital, Ibadan", *Journal of Obstetrics and Gynaecology*, 15(2), 128-180.
- Padmavathi, (2007). Back Massage On Pain Relief During First Stage Of Labour, *Nightingale Nursing Times*, 66(8), 34-37.
- Simkin, (2002). Non-Pharmacological Relief Of Pain During First Stage Of Labour, Journal *of Obstetrics and Gynaecology*, 4(3), 31-59.

- Tzeng Y.L, and SU. TJ, (2008). Low Back Pain During Labour And Related Factors, *Journal Nurses Research*, 2, 231-41.
- Yildirim .G, Sahin NH, (2004). Effectiveness of breathing technique and nurse administered massage on the pain perception among primigravid mothers *Journal of Obstetric and Gynaecological Nursing*, 9(4), 183-187.

Unpublished Thesis:

- Chandra. K, (2009). Conducted a Study to Evaluate the Effectiveness of Olive Oil Massage on Low Back Pain of Primi-parturients During First Stage of Labour in Salem Polyclinic, Salem, Unpublished Master Thesis, The Tamilnadu Dr. M.G.R. Medical University, Chennai.
- Hima Jacob, (2009). Conducted a Study to Evaluate the Effectiveness of Circular Hip Massage on Level of Labour Pain at Government Hospital, Erode. Unpublished Master Thesis, The Tamilnadu Dr. M.G.R. Medical University, Chennai.
- Kavitha, N.K, (2010). Conducted a Study to Compare the Effectiveness of Massage Therapy vs Music Therapy on Labour Pain, at selected Hospital, Bangalore. Unpublished Master Thesis, Rajiv Gandhi University of Health Science, Bangalore.
- Lakshmi. K (2008). Conducted a Study to Evaluate the Effectiveness on Circular Hip Massage on Level of Labour Pain among Primi-parturients At NBMM hospital, Salem. Unpublished Master Thesis, The Tamilnadu Dr. M.G.R. Medical University, Chennai.

Net References:

- Commission on massage therapy accreditation schools. (2008). Training in massage therapy. Retrieved on 26.7.11 from http://www.holisticjunction. com/ categories/had/ massage- therapy- schools. html
- Patricia Janssen. (2008). To measure the benefits of massage. Retrieved 26.7.11 from http://www.massage-therapy-benefits.net/shiatse-massage-therapy. html.
- Shiatsu. (2007). Benefits of massage therapy. Retrieved 26.7.11 from http://www.trinabrown.com/massage/research.html
- Kimbler.L. (1999). Massage techniques for child birth. Retrieved 2.05.11 from http://www.massage.com/news/massagenews.php?id=9058
- Lawrence Leeman. (2003). Pharmacologic pain relief. Retrieved 26.7.11 from http://www.mayoclinic.com/health/massage/sa00082.
- Sedler. (1998). Subjective pain perception during labour. Retrieved 30.12.11 from http://jpma.org.pk/full_article_text.php?article_id=2106.
- Dr.Glew Davies J. (1993). Pain in child birth. Retrieved 28.12.11 from http://www.google.co.in/pq=sdavis
- Seymour. (1997). Massage therapy on pain relief in labour. Retrieved 11.1.12 from http://www.google.co.in/sclient=psy-ab&hl=en&source=hp&q.

ANNEXURE – A

LETTER SEEKING PERMISSION TO CONDUCT THE RESEARCH STUDY

From

Ms. B.Sunitha,
Final Year, M.Sc., (N)
Sri Gokulam College of Nursing,
Salem, Tamil Nadu.

To

The Principal,
Sri Gokulam College of Nursing,
Salem, Tamil Nadu.

Respected Sir/Madam,

Sub: Permission to conduct research project - request- reg.

I, **Ms.Sunitha.B,** II Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing, is to conduct a research project which is to be submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai in partial fulfilment for the award of M.Sc. (Nursing) Degree.

Topic: "A Study to Evaluate the Effectiveness of Circular Hip Massage on Labour Pain during First Stage of Labour among Primigravid Women, at a Selected Hospital, Salem".

I request you to kindly do the needful.

Thanking you.

Date : 13.07.2011
Place : Salem

Yours sincerely,

(Ms. B.SUNITHA)

ANNEXURE – B

LETTER GRANTING PERMISSION TO CONDUCT THE RESEARCH STUDY

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

Date : .....

To

Dr.ResmiRao, M.B.B.S, M.D, D.G.O,
Salem Polyclinic,
Salem.

Respected Sir/Madam,

Sub: Permission to conduct Research study-Reg.

This is to introduce **Ms. B.Sunitha**, a Final year M.Sc (Nursing) student of our College. She is to conduct a research study which is to be submitted to the Tamil Nadu Dr. M.G.R. Medical University, Chennai in partial fulfilment of University requirement for the award of M.Sc (Nursing) Degree.

Topic: A Study to Evaluate the Effectiveness of Circular Hip Massage on Labour Pain during First Stage of Labour among Primigravid Women, at a Selected Hospital, Salem

I request you to kindly permit her to conduct research study in your esteemed institution from 13.7.11 to 7.8.11. She will adhere to the hospital policies and regulations.

Thanking you,

Yours sincerely,

(Dr. A. JAYASUDHA)
PRINCIPAL
Sri Gokulam College of Nursing
SALEM – 636 010.

Date:12.7.11

Place: Salem

SRI GOKULAM COLLEGE OF NURSING
3/836, Periyakalam, Neikkarapatti, Salem - 636 010.
Phone : 0427 - 6544550,2272240,2272250 Fax : 0427 - 2270200, 2447077
Email : sgcon2001@yahoo.com, sgcon2001@gmail.com

Date : .....

To

The Managing Director,
Vijaya Hospital,
Salem.

Respected Sir/Madam,

Sub: Permission to conduct Research study-Reg.

This is to introduce **Ms. B.Sunitha**, a Final year M.Sc (Nursing) student of Sri Gokulam College of Nursing. She is to conduct a research study which is to be submitted to the Tamil Nadu Dr. M.G.R. Medical University, Chennai in partial fulfilment of University requirement for the award of M.Sc (Nursing) Degree.

Topic: A Study to Evaluate the Effectiveness of Circular Hip Massage on Labour Pain during First Stage of Labour among Primigravid Women, at a Selected Hospital, Salem

I request you to kindly permit her to conduct research study in your esteemed hospital from 13.7.11 to 7.8.11. She will adhere to the hospital policies and regulations.

Thanking you

Yours Sincerely,

(Dr. A. JAYASUDHA)
PRINCIPAL
Sri Gokulam College of Nursing
SALEM – 636 010.

Date:12.7.11
Place: Salem

Permitted
D. Narmada

Dr. D. NARMADA, M.D. (O&G)
Regd. No : 63113,
VIJAYA HOSPITAL,
Rajaji Road, SALEM - 636 007

ANNEXURE - C

LETTER REQUESTING OPINION AND SUGGESTIONS OF EXPERTS FOR CONTENT VALIDITY OF THE RESEARCH TOOL

From

Ms. Sunitha.B
Final Year M.Sc., (N)
Sri Gokulam College of Nursing,
Salem, Tamil Nadu.

To,

Respected Sir/ Madam,

Sub: Requesting opinion and suggestions of experts for establishing content validity of the tools.

I, **Ms. Sunitha.B,** a Final Year M.Sc., (Nursing) student of Sri Gokulam College of Nursing, Salem. I have selected the topic mentioned below for the research project to be submitted to The Tamil Nadu Dr. M.G.R. Medical University, Chennai for the partial fulfilment of Master's Degree in Nursing.

Topic: "A Study to Evaluate the Effectiveness of Circular Hip Massage on Labour Pain during First Stage of Labour among Primigravid Women, at a Selected Hospital, Salem."

I wish to request you kindly validate the tool and give your expert opinion for necessary modification. I will be grateful to you for this.

Thanking you

Yours sincerely,

Place : Salem

Date : **(Ms. Sunitha.B)**

Enclosed:

1. Certificate of validation
2. Tool for collection of data
3. Procedure

ANNEXURE - D

TOOL

SECTION –A: DEMOGRAPHIC DATA

Instruction to the participants

Dear participants, this section consists of personal information and you are requested to answers the following information. The data given by you will be maintained confidential.

Sample No: ☐

Date:

1. Age
   a) 18-20 years ( )
   b) 21-25 years ( )
   c) 26-30 years ( )
   d) 31- 35 years ( )
2. Educational Status
   a) Illiterate ( )
   b) Primary education ( )
   c) Secondary education ( )
   d) Higher Secondary education ( )
   e) Graduate ( )
3. Occupation
   a) Employed ( )
   b) Unemployed ( )

4. Work pattern

    a) Sedentary work ( )

    b) Moderate work ( )

    c) Heavy work ( )

5. Weeks of pregnancy

    a) 38 weeks ( )

    b) 39 weeks ( )

    c) 40 weeks ( )

SECTION – B

NUMERICAL PAIN INTENSITY SCALE

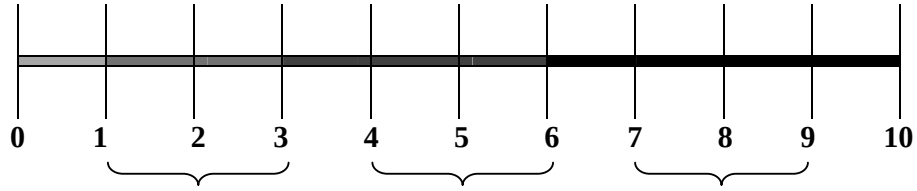
Instruction to the participants

The Numerical Pain Intensity Scale shown to the participants before and after intervention by the investigator to evaluate the intensity of labour pain.

DESCRIPTION OF TOOL

Section-B consists of Numerical Pain Intensity Scale to assess the level of labour pain.

0 – 10 Numerical Pain Intensity Scale (American Pain Society)



This scale helps to assign a number from zero to ten according to the severity of their pain. The total pain score is interpreted as,

0 = No pain

1 – 3 = Mild pain

4 – 6 = Moderate pain

7 – 9 = Severe pain

10 = Worst possible pain

Pain Assessment Chart							
	Hours	**1**	**2**	**3**	**4**	**5**	**6**
Assessment of pain	Before						
	After						

பிரிவு - அ

தனிநபர் பற்றிய அடிப்படை விபரங்கள்

அன்பார்ந்த பங்கேற்பாளர்களே,

இப்பகுதியில் கொடுக்கப்பட்ட கேள்விகள் உங்களின் தனிப்பட்ட விபரங்களை அறிந்துக்கொள்ள பயன்படுத்தப்படுகிறது. நீங்கள் அளிக்கும் விபரங்கள் பத்திரமாக பாதுகாக்கப்படும்.

மாதிரி எண் : [ ]

தேதி:

1. தாயின் வயது (வருடங்களில்)

அ. 18 - 20 ( )

ஆ. 21 - 25 ( )

இ. 26 - 30 ( )

ஈ. 31 - 35 ( )

2. தாயின் கல்வி தகுதி

அ. படிக்காதவர் ( )

ஆ. தொடக்க கல்வி ( )

இ. நடுநிலைக்கல்வி ( )

ஈ. மேல்நிலைக்கல்வி ( )

உ. இளநிலைபட்டதாரி ( )

3. தொழில்

அ. வேலையில் உள்ளவர் ( )

ஆ. வேலையில் இல்லாதவர் ( )

4. வேலையின் வகை

அ. இலகுவான வேலை ( )

ஆ. மிதமான வேலை ( )

இ. கடினமான வேலை ( )

5. கர்ப்பகால வாரம்

அ. 38 வாரம் ( )

ஆ. 39 வாரம் ( )

இ. 40 வாரம் ( )

PROCEDURE FOR CIRCULAR HIP MASSAGE

Meaning:

It is a type of technique in which upward and downwards circular strokes are given on either side of the sacral region with controlled breating, which was thought to minimize the labour pain. The massage is done for 15 minutes with the interval of 1 hour for 4 times during 1st stage of labour.

Purpose:

- Helps to alleviate labour pain and improves the range of motion.
- Able to regulate the breathing pattern.
- Promotes the release of endorphins – amino acids that work as the body's natural pain killer.
- Improves the oxygen and nutrient supply into the tissues and vital organs.
- Reduces the spasm and muscular cramps.
- Enhance muscular relaxation.

General instructions:

- The treatment area should be exposed (free from cloth).
- Women should be in comfortable position.
- The contact and continuity is maintained through out the treatment.
- There should not be any friction force while perform in the technique.

Position:

The mother was assisted to maintain any one of the following position,

- Kneels on the floor.
- Leaning over a chair and supported by cushion or pillows.
- Leaning against the head of the bed or wall.
- Lying on her right or left lateral position.

Preparation of the women and unit:

- Explain the procedure to the women and effect of massage on labour pain.
- Explain the women in such a way that the procedure will not harm to the women and the foetus
- Expose the area (lower back).
- Place the women in lateral lying position.
- Cover the women with covering sheet.

Procedure:

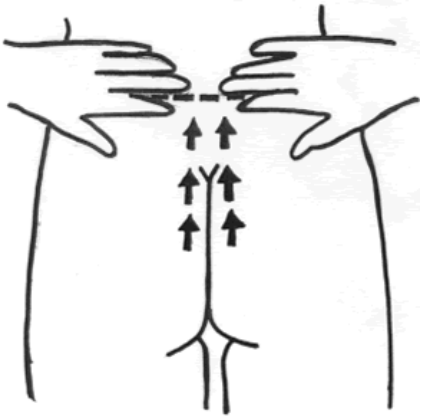
Step-1:

The woman was assisted to maintain comfortable position based on her wish then talcum powder was applied over the sacral region.

Step-2:

The woman was asked to take deep breath during uterine contractions.

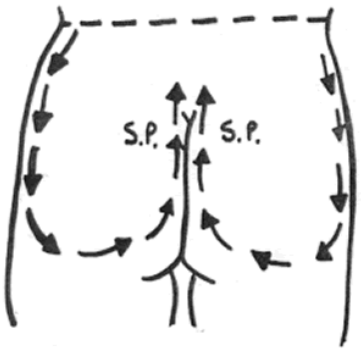
Step-3:



During the inspiration, the student researcher placed her two hands on either side of the women spine up to waist level.

Step-4:

During the start of expiration the fingers on both hands are turned inward and elbows outward to massage smoothly down the sides of the hip until the hands reaches the starting point(hip region).



Step-5:

The massage was performed smoothly and firmly in time with the breathing and without losing contact with the breathing and continued for 15 minutes.

Step-6:

The massage was done for a minimum period of 15 minutes for every 1 hour interval for 4 times.

After care:

- Wash hands
- Evaluate the women tolerance and response.
- Record completion of procedure and the needed details.

ANNEXURE – E

CERTIFICATE OF VALIDATION

This is to certify that the tool developed by **Ms.Sunitha.B**, final year M.Sc. Nursing student of Sri Gokulam College of Nursing, Salem (affiliated to Dr.M.G.R. Medical University) is validated and can proceed with this tool and content for the main study entitled **"A Study to Evaluate the Effectiveness of Circular Hip Massage on Labour Pain during First Stage of Labour among Primigravid Women at Selected Hospital, Salem."**

Signature with Date

ANNEXURE – F

TRAINING CERTIFICATE

AISHWARYAM NATURE CURE HOSPITAL & YOGA CENTRE

(Aishwarayam Health & Educational Trust)

5/148-A, State Bank officer's Colony, Salem - 636 004. Mobile : 98657 12057

Tel : 0427 - 2331133, E-mail : aishwaryamhospital@gmail.com

Dr. A.M. Sudhakar, B.N.Y.S., Dr. Sujatha Sudhakar, B.N.Y.S.,

Date : 26/06/.....201 1

CERTIFICATE OF TRAINING

TO WHOMSOEVER IT MAY CONCERN

I hereby certify that Miss.Sunitha.B, MSc (N) Final Year Student, Sri Gokulam College Of Nursing, Salem, has undergone training on Massage therapy and she is eligible to perform circular hip massage for mothers with labour pain.

Signature: 26/11/2011

PROPRIETOR

Seal: Aishwaryam Nature. Cure Hospital
State Bank Officer's Colony,
SALEM – 636 004.

" Nature Cure Detoxify the Body
Yoga Detoxify the Mind "

ANNEXURE - G

CERTIFICATE OF EDITING

TO WHOMSOEVER IT MAY CONCERN

Certified that the dissertation paper titled "**A Study to Evaluate the Effectiveness of Circular Hip Massage on Labour Pain during First Stage of Labour among Primigravid Women, at a Selected Hospital, Salem"** by **Ms.SUNITHA.B,** It has been checked for accuracy and correctness of English language used in presenting the paper is lucid, unambiguous free of grammatical and spelling errors and is apt for the purpose

Signature:

C. Jennifer Pushpalatha

Mrs. C.JENNIFER PUSHPALATHA
M.A.,M.Ed.,M.Phil.P.hd.,
B.T. Assistant in English,
P.U.M. School, M.G.R. Nagar,
Pernambut - 635 810.

ANNEXURE - H

LIST OF EXPERTS

1. **Dr.Mrs.P. Chellammal, M.D., D.G.O.,**
   Consultant Obstetrician and Gynaecologist,
   Sri Gokulam Hospital, Salem.

2. **Dr.Sujatha Sudhakar, B.N.Y.S. Adv. Acu,**
   Nature Cure and Yoga Physician,
   Aishwaryam nature Cure Hospital & Yoga Centre,
   Salem.

3. **Prof. Dr. A. Jayasudha, Ph.D (N),**
   Principal,
   Sri Gokulam College of Nursing,
   Salem.

4. **Prof. Dr. Selvanayagi, Ph.D(N).,**
   Principal,
   Vinayaka Mission College of Nursing,
   Salem.

5. **Mrs. Thilagavathi, M.Sc(N).,**
   Professor, Department of OBG,
   Shanmuga College of Nursing,
   Salem.

6. **Mrs. R. Nalini, M.Sc (N).,**
   Associate Professor, Department of OBG,
   Sri Gokulam College of Nursing,
   Salem.

7. **Mrs.R. Sheela Theres, M.Sc (N).,**
   Assistant Professor, Department of OBG,
   Sri Gokulam College of Nursing,
   Salem.

ANNEXURE - I

PHOTOS

RESEARCHER ASSESSED THE LEVEL OF LABOUR PAIN

RESEARCHER PROVIDING CIRCULAR HIP MASSAGE